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DIVISION 100 – GENERAL PROVISIONS

SECTION 101 – DEPARTMENT ORGANIZATION

101.1 –GENERAL

The New Hampshire Department of Transportation has been created to administer the transportation and public works needs for the people of New Hampshire.

All functions of the Department are under the direction of a Commissioner who is appointed by the Governor and Council. The Commissioner is directly responsible for the planning, design, construction, and maintenance of our State highway system. The Commissioner is assisted by an Assistant Commissioner and Directors of Administration, Project Development, Operations, Public Works & Transportation, and Aeronautics.

The Bureau of Construction functions directly under the Director of Project Development. It is administered by a Bureau Administrator and District Construction Engineers. The field force consists of engineers and technicians who administer projects throughout the construction stage; see the Bureau Organization Chart, page 100-8.

For the other bureaus and their relationships within the Department, see the Department Organization Chart page 100-7, and the employee's handbook, *You and Your Job*.

Funds for the Department are provided by a State gasoline tax, some motor vehicle revenue, town funds, and Federal funds. These are budgeted and approved by the State Legislature.

COMMISSIONER
Carol A. Murray
271-3734

Audit
Carol Macuch
271-1557

Hearings Examiner
Marie-Helene Bailinson
271-3734

Assistant Commissioner
Jeff Brillhart
271-3734

Public Information Officer
Bill Boynton
271-6495

Directors

ADMINISTRATION
James Marshall
271-1697

AERONAUTICS RAIL & TRANSIT
Jack Ferns
271-1676

OPERATIONS
Lyle "Butch" Knowlton
271-3736

Assistant Director
Michael Burlage
271-7419

POLICY
Edwin Smith
271-1486

PROJECT DEVELOPMENT
James Moore
271-1486

Assistant Director
William Cass
271-1486

Bureau Administrators and District Engineers

Finance & Contracts
William Watson
271-3466

Human Resources
Fran Buczynski
271-3460

Labor Compliance
David Chandler
271-6754

Health and Safety
Colleen Cook
271-2467

Public Works*
Matthew Moore
271-3516

Office of Information Technology Services**
Dane Prescott
271-3281

* embedded State Bureau
**embedded State Agency

Aeronautics
Tricia Lambert
271-2551

Railroads & Public Transportation
Christopher Morgan
271-2468

Bridge Maintenance
Edward Welch
271-3667

Turnpikes
Harvey Goodwin
485-3806

Mechanical Services
Thomas Jelley
271-3721

Traffic
William Lambert
271-2291

Highway Maintenance
Michael Pillsbury
271-2693

Bridge Design
Mark Richardson
271-2731

Highway Design
Craig Green
271-2171

Environment
William Hauser
271-3226

Construction
Ted Kitsis
271-2571

Materials & Research
Alan Rawson
271-3151

Project Management
Chris Waszczuk
271-2171

Right-of-Way
Bill Janelle
271-3222

Planning and Community Assistance
Ansel Sanborn
271-3344

District 1 - Lancaster
Greg Placy
788-4641

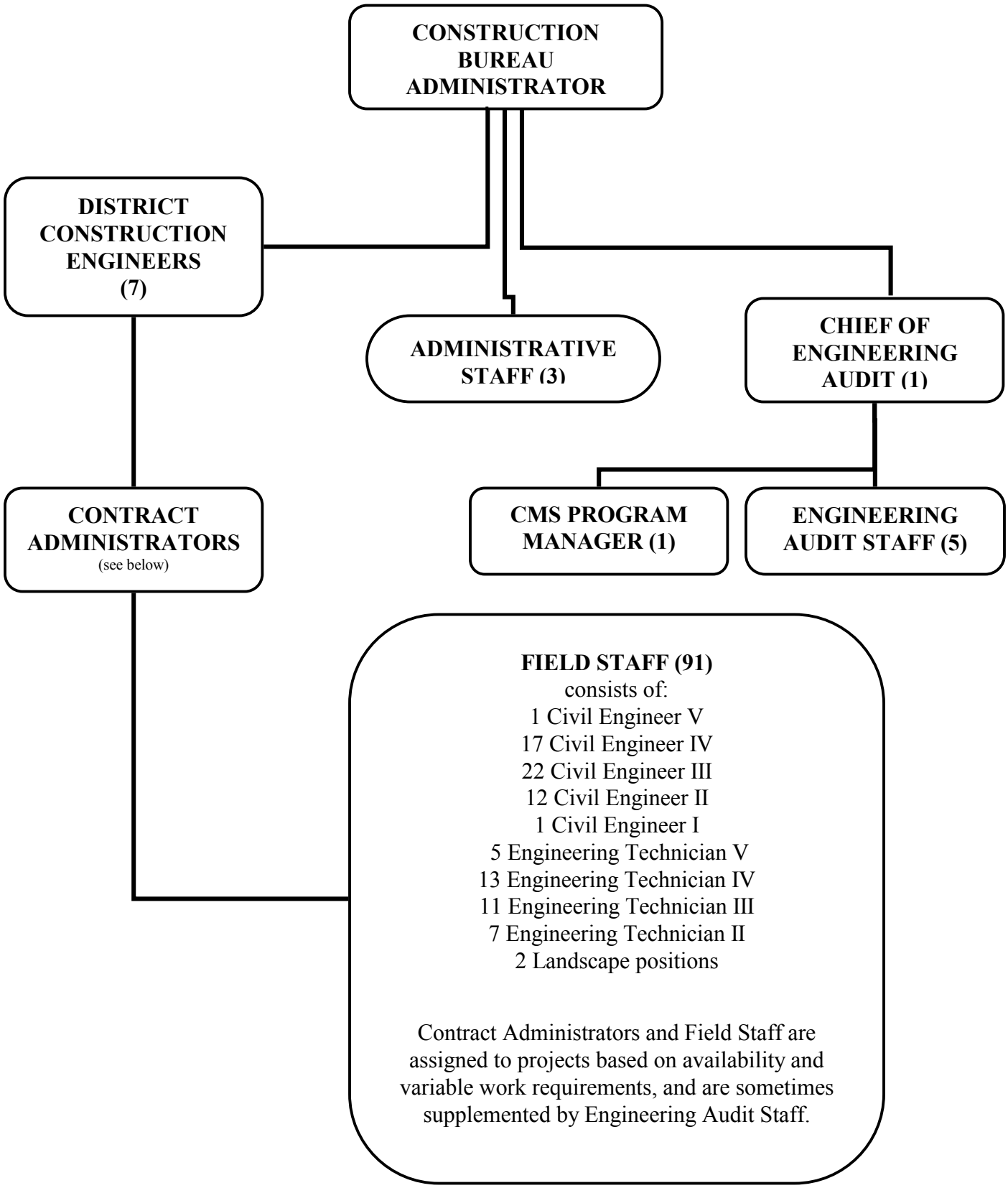
District 2 - Lebanon
Alan Hanscom
448-2654

District 3 - Gilford
Mark Morrill
524-6667

District 4 - Swanzey
Doug Graham
352-2302

District 5 - Hooksett
Hiram Morrill
485-9526

District 6 - Durham
Doug DePorter
868-1133


CONSTRUCTION BUREAU ADMINISTRATOR
DISTRICT CONSTRUCTION ENGINEERS (7)
ADMINISTRATIVE STAFF (3)
CHIEF OF ENGINEERING AUDIT (1)
CONTRACT ADMINISTRATORS
(see below)
CMS PROGRAM MANAGER (1)
ENGINEERING AUDIT STAFF (5)
FIELD STAFF (91)
consists of:
1 Civil Engineer V
17 Civil Engineer IV
22 Civil Engineer III
12 Civil Engineer II
1 Civil Engineer I
5 Engineering Technician V
13 Engineering Technician IV
11 Engineering Technician III
7 Engineering Technician II
2 Landscape positions
Contract Administrators and Field Staff are assigned to projects based on availability and variable work requirements, and are sometimes supplemented by Engineering Audit Staff.

101.2 – FEDERAL HIGHWAY ADMINISTRATION

On Federally-funded projects, after the Federal Highway Administration (FHWA) has approved our Plans, Specifications, standards, and procedures, we enter into an agreement with them that provides from 50 to 100% of the cost of necessary planning and design work, as well as purchase of the Right-of-Way.

To determine to what extent the FHWA is participating, if at all, in these areas, check the project agreement estimate. Where Right-of-Way changes are encountered or there are changes in work to meet abutting property, it should be determined whether or not the Federal government is participating in the R.O.W. involved so that the FHWA Engineers may be informed of the change where necessary.

The State awards and administers construction contracts with the concurrence of the FHWA. On projects with Federal oversight, Engineers from the FHWA inspect the work of the Contractor and performance of the State personnel to ensure that the terms of the contract are met and that all work is properly documented. The FHWA Engineers have no direct dealings with the contractor. Their inspections of the work are to ensure that the State personnel are obtaining adherence by the Contractor to the Plans and Specifications. FHWA Engineers should be courteously received and afforded every opportunity to view the work and the project records. They should also be informed of any contemplated changes or extra work so thatthey may view the problem and discuss it with the Contract Administrator. This will help speed their approval of participation in the change.

The FHWA Engineers' presence should be recorded on the daily report along with any important items discussed or points of controversy.

101.3 – PROJECT ORGANIZATION

Each construction project is under the supervision of a Contract Administrator. The Contract Administrator is assigned to the project between the time bids are opened and the beginning of work. The Contract Administrator may handle the work alone on very small contracts, but normally will have assistant engineers, technicians, and aides as required for the work load on the project. The Contract Administrator will assign, instruct, and supervise these assistants to provide the necessary project layout, inspection, materials control, record keeping, and documentation, thus assuring conformance with the contract.

The Contract Administrator, as the Department's representative on a project, will have frequent contact with the Contractor, property owners, municipal employees, utilities, and the traveling public. The Contract Administrator's intelligent, tactful, and sometimes firm handling of matters with these varied individuals and groups is indispensable to the work and, when properly administered, will result in respect for the Department and its employees.

101.4 – INTRA-DEPARTMENTAL RELATIONS

Harmonious working relations among all employees are essential to the efficient operation of the Department.

Each employee should become generally familiar with the operation, problems, and area of responsibility of other divisions. With this understanding, employees will be better prepared to perform their duties in a manner that meshes with that of others, and provides the cooperative effort necessary for an efficient organization. Each employee should cultivate good working relations with fellow employees. One of the basic elements of good employee relations is good communication among individuals. A supervisor's instructions to employees should be complete and clearly given so that the employees can fully understand their duties and responsibilities. Conversely, the employees should brief their supervisor on the phases of the work that they have covered. This principle applies equally well between office and project personnel. Employees should carry out instructions as given by their supervisors. This should not, however, curb the initiative of employees to discuss methods and procedures with their superiors that will result in a better understanding of the employee's work and responsibilities.

101.5 – DEPARTMENT EQUIPMENT

A. Engineering Equipment

Many items of engineering equipment are delicate precision instruments that require an understanding of their proper use and their limitations. The Contract Administrator should teach assistants the proper care, use, adjustment, and storage of this equipment so that it will be in proper working condition at all times, and so its accuracy can be relied on.

B. Supplies and Equipment

The following articles, as needed, should be in the Contract Administrator's possession. They are available at the Construction Bureau Office, except as noted. Some forms are available on CMS. Miscellaneous field office supplies may also be purchased through the contract (see Standard Specifications section 698).

Plans
Record Plans
Contracts
Standard Specifications
Standard Plans for Road & Bridge Construction
Construction Manuals
Utility Accommodation Manual
Soils Letter
Right-of-Way Letter and Hearings
Utility Agreements
Contract Estimate Forms
Balance and Excess Forms
Daily Report Forms
Daily Report of Extra Work Forms
Utility Daily Report Forms
Contractor's Proposed Schedule of Operation and Progress Report
Multi-Copy Correspondence Pads
Interdepartmental Memorandum Pads
Equipment Report Forms (When using State Vehicles)

Stamped Envelopes
Time and Expense Sheets
Printed Pile Notebook Pages
Contract Administrator's Corrective Action Reports
Field Test Report Forms
Miscellaneous Forms for Field Laboratory
Field Authorization of Extra Work Forms
Pit Information Forms
Survey Request for Intermediate and Final Sections
Straight Line Analysis Charts
Concrete Plant Work Sheet
Concrete Batch & Delivery Record
Item Summary Pages (with over- and underrun on back)
Summary Pages (printed the same on both sides)
Quantity Estimating Form
Project Record Submission Check List
Uniformed Officer and Flaggers Form
Loose-Leaf Notebook and Fillers (Record Book)
File Folders and Transfer Case
General Office Supplies
6 ft Rule
50 ft or 100 ft Cloth Tape
Hand Level
Plumb Bob and Sheath

Supplies to be acquired from the Materials and Research Bureau:

Sample Bags
Sample Cans
Sample Tags

When necessary, and if available, the following articles may be obtained from the Construction Bureau Office:

Steel Tapes
Spring Scale and Clamps
Transit and Level Rod
Thermometer (regular and recording)
Planimeter
Aerial Maps and Prints

C. Vehicular Equipment

State-owned vehicles are provided for field personnel on the basis of need, availability, and to the best advantage of the State. Their use shall be confined to necessary State business as defined in Section 154 of this Manual.

A state driver's license is required to operate a state vehicle. Operators of state vehicles should understand that they are driving on their personal license and are solely responsible for any traffic violations.

Employees driving state vehicles are expected to use defensive driving techniques, to see that their car is kept clean and properly maintained, to be especially courteous, and to set a good example on the highway. Also, the Department of Transportation Policy Regulation 108, states, "A Department employee, operating a State owned vehicle or operating a personal vehicle on State business, unless he/she is on an emergency mission, is encouraged to stop and offer reasonable assistance to a motorist in distress".

In case of an accident with a state-owned vehicle, the first priority is to get the required medical assistance for any injuries. Next, the employee should make out the motor vehicle accident form, which is kept in the glove compartment of state vehicles. The employee should also notify the garage and the Construction Bureau Office by telephone as soon as possible. Cooperate fully with law enforcement officials, but do not discuss the subject of liability with others.

101.6 – PERSONAL EQUIPMENT

Field personnel are expected to have a personal vehicle available for daily use if they have not been assigned a State vehicle. Those who drive State vehicles may also need to drive a personal car when the State vehicle is in for repairs and a replacement is not available.

101.7 – DEFINITIONS AND TERMS

Important definitions and terms used in the Contract, Specifications and this Manual are contained in Division 100 of the Standard Specifications.

SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS

102.1 – GENERAL

This section of the Standard Specifications establishes the conditions under which bids are accepted by the Department.

The Contract Administrator should become familiar with the following paragraphs in the Standard Specifications that pertain directly to the work at the Project level:

1. 102.04 - Interpretation of Quantities in The Bid Proposal
2. 102.05 - Examination of Plans, Specifications, Special Provisions, Proposal and Site of Work
3. 102.06 - Familiarity with Laws

SECTION 103 – AWARD AND EXECUTION OF CONTRACT

103.1 – GENERAL

This section of the Standard Specifications outlines the procedures and obligations involved in the award of the Contract to the successful bidder. The Contract

Administrator should make certain, through contact with the Construction Bureau Office, that the Governor and Council have approved the award of the Contract before Work is allowed to proceed.

SECTION 104 – SCOPE OF WORK

104.1 – GENERAL

This section of the Standard Specifications establishes the Contractor's and the Department's obligations with respect to maintenance of traffic, and also the conditions under which alterations of the Work may be made. The Contract Administrator should bear in mind that any alteration in design, Extra Work, or removal of material beyond template lines must be approved by the District Construction Engineer.

This Section also specifies the disposition of structures found in the highway. The Contract Administrator should become familiar with Standard Specifications Paragraph 104.08.

SECTION 105 – CONTROL OF THE WORK

105.1 - AUTHORITY OF THE ENGINEER

A. The Responsibilities of the Contract Administrator

The person who assumes the responsibility for the supervision of a highway construction project is, without a doubt, the keystone of the whole organization of any highway department. Everything depends upon this person's diligence, know-how, and integrity. All the work of the planners and designers is brought into being through this person's efforts. The assignment is, at the same time, the most demanding and the most rewarding. It demands judgment, courage, ingenuity, foresight, and tact. Its rewards include priceless experience in the arts of supervision, organization, and public relations. It also furnishes a deep pride and satisfaction in the knowledge of a tough job well done.

The Contract Administrator in charge of a project is just that. The Contract Administrator must assume control of the job and must be familiar with every detail of the Plans and know the Specifications for every item involved. The Contract Administrator must make sure that assistants know and understand the Specifications for the particular work they are inspecting. The Contract Administrator must also be sure that the assistants know exactly what to do when things are not being done in a satisfactory manner. The Contract Administrator must insist on being fully informed at all times of the Contractor's schedule of operations and the means by which its schedule is to be put into effect. The Contract Administrator must see that all Specifications applying to the project are fully and fairly enforced and must be sure that a full, daily record is kept of all activities on the project.

All engineering personnel should be familiar with the limits of their authority. Contract Administrators do not have the authority to change or relax any specification. Higher authority will spell out the right of Contract Administrators to make minor changes in the Plans. Certainly, Contract Administrators must seek higher authority for making any

change that would materially affect the quantities of Work. On Federal Aid contracts, Major Changes require approval of the Federal Highway Administration (see section 151.5).

The Daily Report is one of the most important documents kept by Contract Administrators. It is kept as a project diary with day-by-day documentation of the orders, explanations, and events that occur on the job.

The Daily Report is often used as evidence in court actions. Therefore, Contract Administrators or acting Contract Administrators must personally sign each Daily Report. Each day's activities, including any pertinent discussion, should be clearly recorded so that they can be readily understood by all concerned. Should Contract Administrators ever be called upon to testify from the Daily Reports, they will be thankful for the time and care they put into keeping them. There are instructions for keeping the Daily Report in Division 800.

The proper measurement of quantities and the records and computations based on the measurements is a major responsibility of Contract Administrators. The records and computations should be kept in a neat and business-like manner. Computations should be carefully checked and signed by the person who does the work and by the one who does the checking. All supporting data, such as weigh slips and invoices, should be preserved in a chronological order, and references should indicate where they can be found. See Division 800 for specific instructions on record keeping.

It is also the responsibility of Contract Administrators to know and to document the fact that all materials being used meet the Specifications (acceptance testing). Contract Administrators should also work with the Materials and Research Bureau and assist them in scheduling independent Assurance Sampling and Testing. For more specific instructions on materials control, see Division 700.

Checking and rechecking dimensions is also a major responsibility of Contract Administrators and is a traditional safeguard against blunders. The same thing applies to elevations. This process of checking and rechecking is particularly important around structures. It is the duty of Contract Administrators to ensure that project assistants and inspectors acquire this habit.

Present day highway construction is a fast-moving operation. It takes an alert, knowledgeable person to keep abreast of it. The biggest job belonging to Contract Administrators is to ensure that all project personnel, including themselves, are mentally geared to the rapid pace of modern construction. Once that is done, the job will not be as difficult as it first appeared. With full knowledge of the Plans and Specifications, knowledge of rights and responsibilities, and an honest effort to properly supervise the job, there is nothing to fear from inspections-in-depth or any other type of inspection or investigation. Since the modern Contractor depends on production for much of its profit, Contract Administrators should endeavor to time any staking, layout, and checking so as to keep delays to a minimum. Also, Contract Administrators should take the time needed to properly consider all decisions, but should not delay the Contractor unnecessarily. If Contract Administrators feel that a decision is beyond their authority or knowledge, they

should seek timely advice from the District Construction Engineer, and pursue the issue until an answer is found.

When seeking decisions from a District Construction Engineer, Contract Administrators should have all information readily available for discussion.

Another important duty of Contract Administrators is to train the assigned project personnel. Often these are beginners with little or no experience in this field. The way these people are instructed and trained not only affects the efficiency of the job supervision, it also affects the future operation of the Department. It is vital that the proper mental attitude be instilled, free from cynicism and indifference. New employees must be told how to perform a particular assignment and why it has to be done. Employees must be given an understanding of how individual efforts fit into the whole Project and their importance to the final results. Employees must fully understand the steps to be taken when things go wrong and must have complete confidence in their immediate superior. Efforts should be made to develop a professional attitude and a pride in the organization for which they all work. The first few weeks a new person is employed are vital to that person's future worth as an employee. No one can influence new employees more than Contract Administrators.

B. Relations with Contractors and Suppliers

The first contact Contract Administrators have with the fast-moving, demanding duties of supervising a modern highway construction project can be a confusing and frightening experience unless they are given a clear idea of the mission and of the proper deportment required by their responsibilities and have a basic knowledge of how to handle themselves. Despite construction experience as an assistant or inspector under someone else, the full authority and responsibility entrusted to new Contract Administrators is a challenge.

The aim and mission of the person in charge of the inspection of a construction project is to ensure a wholly satisfactory job built in accordance with the Plans and Specifications under which the Contract was awarded. Contract Administrators are the representatives of the Department which entered into a contractual agreement with the Contractor for the Work to be performed. In carrying out this mission, Contract Administrators are thrown into constant contact with the Contractor and its representatives, and often suppliers of materials and services. These contacts can be business-like and dignified, or they can be sources of friction and hostility. For a successful operation, it is necessary that a business-like relationship based on mutual respect be developed.

With that in mind, the best approach is the establishment of a regular schedule of job conferences for discussion of problems and schedules. Notes should be kept of the developments that occur for future reference.

Conferences should then be held at regular and frequent - say weekly - intervals. Special conferences should be quickly arranged when emergencies, disagreements, or any indications of friction or trouble develop. To be effective, those participating must strive for an atmosphere of mutual respect. It must be kept in mind that respect is not a commodity that is for sale at any store; it must be earned by the day in, day out practice of fair play and honesty.

It is important to understand that most Contractors are business persons and that relations with them have to be on a business basis. They are in business to make money. Most of them intend to do their job properly. If they can develop a method of producing the desired result more economically, Contract Administrators should go along as far as the Specifications will allow. The Contractor is not "the enemy", but a business person with whom the State has entered into a contract. Contractors risk their investment in machinery and payrolls with the hope of realizing a profit, and there is nothing wrong in that so long as the owner, the State, gets a full return for its money. With that in mind, one principle governing Contract Administrator-Contractor relations is that a Contractor should never be ordered to do any work unless the method of paying the Contractor for the work is indicated in the Contract or by subsequent Work Order or its equivalent.

Modern contracting depends on realizing the productivity of the highly efficient equipment now available. This productivity is also in the best interest of the traveling public, since their temporary inconvenience is ended more quickly, and they then enjoy the comfort, safety and efficiency of the new facility. Therefore, every effort must be made by Contract Administrators and their staff to "stay on top" of the job and to keep it on or ahead of schedule. Contract Administrators must think ahead to the next operation and be prepared for it. The Contract Administrator should insist, in the periodic conferences, that the Contractor plan its work and keep the Contract Administrator fully informed of the Contractor's plans. In that way, delays can be avoided, cooperation improved and intelligent deployment of available inspection manpower can be achieved.

Contract Administrators should be sure of their rights, duties and prerogatives under the rules and laws of the State. Contract Administrators should know exactly where they stand when any corrective action becomes necessary. If a Contractor or its superintendent should refuse a legitimate order, Contract Administrators must know the steps that will legally impose the proper restraints. These will be found in the Contract documents. Seriously contested orders should be presented to the Contractor in writing, with copies to the Project File and Construction Bureau Office. All such incidents should be recorded in the Daily Report with full detail, including witnesses present.

Communication of instructions to the Contractor, its superintendent, or foreman should be done in a business-like, courteous manner. Contract Administrators should be firm without being abusive. When Contract Administrators are sure of their grounds, their authority, and their means of enforcing it, there is no need for abuse, recriminations, or undignified arguments. On the other hand, no Contract Administrator or inspector can be expected to take abuse from a Contractor or its representatives. Here, it is up to the administrators of the Department to deal promptly and decisively with any instances of improper language or threats used against a Contract Administrator or inspector.

Contract Administrators should avoid dealing directly with laborers and equipment operators. Contract Administrators must avoid trying to actually "run the job" or to boss the Contractor's people or run a gang. The job of Contract Administrators is to see that the desired results are achieved. The method of achieving them is up to the Contractor, except where method is specified. Contract Administrators should tell the superintendent or foreman what is wanted , then see that it is performed.

It must be realized that those who represent the public's interest on highway construction contracts are overseeing the spending of large sums of tax-collected money. That being so, it must be expected that the public, their elected and appointed representatives, and the press will display a lively interest in how that money is spent. That scrutiny is constant, often critical, sometimes unfair or hostile. The engineering and inspection people charged with safeguarding the public's interest must, therefore, not only be efficient and incorruptible; they must also scrupulously avoid any action that might be misinterpreted or misrepresented.

There is no substitute for plain honesty. To solicit or accept a bribe or a gift from a Contractor would be an act that would place the individual doing so in jeopardy of summary dismissal and possibly criminal prosecution. There are, of course, Contractors and suppliers who offer unsolicited presents, favors, entertainment, and bribes to Contract Administrators and inspectors, hoping to obtain favored treatment or relaxed control. A person's personal integrity and self-respect require that such offers be rejected. People who accept gifts of entertainment have placed themselves under obligation to the giver. Both giver and receiver of such favors have demeaned their personal self-respect and destroyed any mutual respect that might have existed. Almost inevitably, such transactions are discovered by someone or some agency, with resulting disgrace to both parties. Widespread and even isolated transgressing, undermine the public's confidence in the whole industry. No matter how lavish the gift, it is not worth the destruction of a career and the loss of the respect of friends, associates, and family.

It is not necessary to carry this situation to such unreasonable lengths as to refuse the offer of a cigarette or insignificant things. A prissy, stiff-necked, unfriendly demeanor only succeeds in making a person look ridiculous. Such favors as frequent lunches or dinners should be declined with thanks. Often the intent is cordial, and the one who makes the offer does so out of simple friendliness. If one's judgment indicates that acceptance of the offered hospitality might be indiscreet, might be misconstrued, or that one would feel under the least obligation, one should decline it graciously. Contract Administrators or inspectors must treasure their personal integrity and jealously guard their reputation. Summing up, in dealing with Contractors and suppliers, relations must be kept on a business-like basis, and any favor, no matter how small, which engenders any feeling whatsoever of obligation to that individual or company, should be declined.

C. Public Relations

Contract Administrators are one of the most important elements in the Department's public relations. In this position Contract Administrators are continually in contact with the people who live alongside the road that is under construction and with the traveling public. To them, Contract Administrators represent the State. With all these people, Contract Administrators must be patient and courteous at all times. At times, Contract Administrators will be subjected to tirades and abuse from bordering residents and passing motorists. Because Contract Administrators are not just individuals, but actual representatives of the State who is their employer, they will meet such attacks with patience and dignity. They should explain the situation and if possible address any mistake or oversight that has been made. Examination of the operation of maintaining traffic carefully is vital. Contract Administrators must put themselves into the frame of mind of a driver who is unfamiliar with the job, and see what such a person would need

for guidance. Remember, in the last analysis, they are the people who are paying the salary of the Contract Administrators, as well as paying for the construction project.

Good relations with the people with whom one is in daily contact are not the result of an occasional effort. They require constant thought and a sincere desire to anticipate people's needs and wants. Road building operations impinge upon vital and sensitive parts of many people's daily routine of living. It represents a major change in the pattern of daily travel of residents and business people whose homes and properties abut the highway under construction. Their most prized possessions, their home, their personal car, as well as their comfort and convenience, are involved. Most of them have no concept of the problems of the road builder and may care less. They feel that they were there first and that they are entitled to the conveniences to which they have become accustomed. Their viewpoint must be understood in order to deal patiently with their demands and criticisms.

There are many services, such as mail delivery, County Nurse Services, daily food deliveries, and bus services, for which special provisions must be made. The Contractor has as large an interest in promoting local goodwill as do the Contract Administrators. The Contractor's cooperation must be sought in providing for these necessities. Roadside merchants whose livelihood depends on doing business with the travelers have special problems which, to them, are all-important. It is good practice to make their acquaintance, ascertain any especially vital needs they may have, and arrange to accommodate them if it is possible. The Contractor must arrange to maintain reasonable and safe access to homes and businesses at all times during construction. Oftentimes, construction schedules can be arranged at mutually convenient times, or other gestures of goodwill can be made that take a lot of the annoyance and hardship out of the period of construction. Just the fact that people have a chance to state their problems and get sincere and courteous consideration goes a long way toward avoiding the bitterness and anger that could otherwise develop. Contract Administrators must always be willing to confer with these people and to give their problems careful thought.

The stranger or tourist who must make his or her way through a construction job has many fears and worries that may not occur to people familiar with construction and construction equipment. The heavy, fast moving haul rigs in use today are a frightening sight to a person not used to their noisy proximity. Thus, they are in a tense and uncomfortable frame of mind as they traverse a construction job. Also, their familiar guides, the white and yellow lines, the standard signs, and the guard rails, may no longer be there. Multiply these unavoidable annoyances by impaired vision due to clouds of dust, poor traction due to mud or sand, a poorly maintained riding surface, lack of clear and legible guide signs, or insufficient, surly, or untrained flaggers, and the driver feels that he or she has been subjected to a dangerous and unnecessary ordeal. Most Contracts provide a method of compensating the Contractor for properly maintaining a safe and reasonably comfortable roadway for passing traffic through the construction areas. It is the duty of Contract Administrators to see that the Contractor does it. Highways today are financed out of user taxation. The passing tourist and the local commuter or shopper are highway users. Their taxes pay for the road being built and the salaries of the people doing the building. They are entitled to careful and courteous consideration, and their friendship and goodwill are all-important to the highway industry.

Another group with which Contract Administrators have frequent contact is the elected or appointed officials of the locality through which the project traverses. Local residents turn to them with their complaints and problems. As their representative, the official must relay their complaints and seek relief for them. It is wise to make the acquaintance of these officials at an early date and to inform them as fully as possible about the details of the plans and the schedule of operations. Thus they will not appear ignorant of the situation when called upon by their constituents. The officials should be informed as quickly as possible of any change in plans or scheduling for the same reason. These government officials invariably appreciate the courtesy of being kept informed. Their friendship and cooperation are of vital importance.

The local press will also take a lively interest in any road construction in its area of coverage. Often the first interview with an inquiring reporter from a local paper is the first experience Contract Administrators obtain in press relations, and the knowledge that their answers will appear in print may upset their poise. It is wise to remember that, while reporters may have very little knowledge of road construction, they probably are well acquainted with residents of the locality. Their questions may be based on comments from these residents, and such inquiries should be answered frankly and factually with as full an explanation as possible. Contract Administrators represent a public agency spending public money. As such, they are not entitled to withhold this information from the public press.

Contract Administrators should try to present the information in as favorable and factual a form as possible. Contract Administrators should, however, confine their remarks to those areas over which they have personal control. It is not their prerogative to comment on the policies of the Department which employs them. Contract Administrators are not entitled to offer public criticism of their superiors. Any questions directed toward the latter two subjects should be politely turned aside. Contract Administrators will not offer criticism of local political figures under any provocation. Good reporters will spot an evasive answer at once, so one should be frank and open about the project details and conditions. A friendly open attitude will incline reporters to believe the answers they have received. The development of an atmosphere of mutual confidence with the local press is a giant step toward good public relations.

For good public relations, the most important things Contract Administrators can do are keep the project in good traveling condition and minimize inconvenience to the tourist, the commuter, and the people who live along the construction site. It is a good idea to check the project for both day and night driving. Familiarity with the site often dulls the Contract Administrator's realization of some of the hazards or inconveniences. To overcome this, Contract Administrators should ask friends or acquaintances not familiar with the project to drive over the job - both during the day and at night - and point out what they find confusing, troublesome, or inconvenient.

Keep all the people involved informed, by personal contact, through the press and through the local officials. Make yourself readily available to these people. Keep the project in the same condition you would like to find it if you were on a trip with a shiny new car and a lot of miles to cover before dark.

D. Supervision

The art of supervising and directing the efforts of other workers is one for which some people are fortunate enough to have a natural ability. Most people, though, have to develop this skill. Contract Administrators, because of their precise, mathematical and scientific approach to situations, are generally among the latter. Their supervisory skills usually are developed in the school of actual experience.

There is no better training in the art of supervision than day-to-day work and responsibilities of Contract Administrators. Contract Administrators soon learn that those who control others must first learn to control themselves. There is no room for temper outbursts. There is no place for indecision or evasion of responsibility. To gain the respect of subordinates, Contract Administrators must obviously merit respect. Contract Administrators earn respect by knowing the job, knowing the organization, showing consideration for the problems of those they supervise, and by firmness and level-headedness in emergencies and disagreements. In handling a construction project, Contract Administrators are preparing themselves for greater responsibilities. By being aware of that fact and observing intelligently the results of one's actions, one cannot help but derive great benefits from one's job.

The staff assigned to help Contract Administrators on the job are under their full control. Contract Administrators are responsible for the quality and quantity of the work of their staff. Discipline and control are up to the Contract Administrators. There is no need for them to be overbearing on the one hand, nor fawning and wheedling on the other. It is possible and desirable to be firm yet pleasant. Defiance of their authority must not be permitted. At the same time, Contract Administrators should never discipline subordinates in a manner that will humiliate them in the eyes of their colleagues or the staff they, in turn, must supervise. Such a subordinate should be taken aside to be corrected. It is also important that Contract Administrators be as free with praise for a good job as they are with the criticism for a poor one.

One of the great problems of supervision is that of maintaining the personal relationship between the supervisor and the supervised. Being a supervisor is sometimes a lonely job. A supervisor may be friendly but not familiar, and certainly must avoid even a hint of partiality or favoritism.

Good supervisors will make sure that their helpers understand exactly what is required of them. Supervisors will indicate clearly to whom they are to report, from whom they are to receive instructions, and the extent of each individual's responsibility. By the same token, such supervisors must fully understand the extent of their own authority and responsibility, and to whom they are responsible. Confusion in the field of authority and responsibility can only result in poor supervision.

One of the proven methods of obtaining the voluntary cooperation of subordinates is to build their self-esteem. This is not done by transparent or effusive flattery. It is achieved by impressing on them the importance of their particular task, and making them understand its part in the production of a good end product. It is nourished by a quiet word of praise for a job well done. It is encouraged by listening carefully to their ideas and suggestions, and by using these suggestions whenever they are sound. When the ideas or suggestions of subordinates are implemented, be sure that they receive full credit for it.

When employees, especially new ones, exhibit the wrong attitude, it is wise to offer a helping hand. This should be done quietly and privately in order to avoid embarrassing them in front of their fellow workers. That kind of consideration can pay excellent dividends. If the employee does not respond to courteous corrective measures, then and only then, is it time to employ firmer measures. This, too, should be done in private and without humiliation, to preserve and protect the dignity of both employee and supervisor, and the morale of the organization.

It is good policy to keep subordinates informed of changes in plan or policy unless such changes are of a highly confidential character. This imparting of information should be accompanied by a careful explanation of the motivations and reasoning behind the changes. Frequent conferences with subordinates to discuss job problems is a good idea. While not relinquishing in the least the power of final decision, supervisors can impart tremendous team spirit by consulting with their subordinates before making the final decision. They feel that they "belong" and that their thoughts are respected. Employees who feel this way have self-respect, and their loyalty to the organization will never be in doubt.

The field of supervision has been covered by many books and written by students of the art. These are a few basic points that seem to apply with special emphasis to highway work and the special problems associated with it. Good supervision is good business and, expressed in its simplest form, is nothing more than the application of the "Golden Rule" to the work at hand.

E. On-the-Job-Training Program - Item 693

The primary objective of the OJT Program is to provide training and upgrading of minorities and women toward journey-level status. Contract Administrators actively support this goal when performing the tasks described below.

Contractors must complete the "OJT Program Enrollment Form" prior to the OJT trainee beginning work and submit it to the NHDOT Labor Compliance Office. If the Contract Administrator receives this form directly from the contractor, it should be faxed to the External EEO Coordinator in the Labor Compliance Office. The Contract Administrator should retain a copy of the enrollment form, with the assigned work classification, for the project record.

Each Friday contractors must submit a "Weekly Trainee Report" for each OJT trainee directly to the Contract Administrator. The Contract Administrator must review, sign and fax all Weekly Trainee Reports no later than Monday following the report week. A copy of the report should be retained by the Contract Administrator to calculate progress payments for training.

Periodically, the Contract Administrator shall observe the OJT trainee to ensure the trainee is performing functions that are related to the selected work classification.

The Contract Administrator should contact the External EEO Coordinator with any concerns regarding the OJT trainee; e.g., work attendance, job performance, or other compliance issues.

The Contract Administrator will assist the Compliance Review Officer and/or the External EEO Coordinator in coordinating on-site interviews with OJT trainees.

See also pages section 800 Record Book Item 693 of the Construction Manual.

105.2 – INSPECTION DUTIES OF PROJECT PERSONNEL

Competent inspection is one of the most important elements of project control provided by the project personnel. The Contract Administrator will handle inspection duties without assistance when working on very small projects, but normally there will be one or more assistants to aid with these duties.

Plans and Specifications are carefully prepared; but if, through lack of inspection, faulty material or poor workmanship is incorporated into the Work, then the purpose of these Plans and Specifications has been defeated. Proper inspection requires good judgment, diplomacy, common sense, and a thorough knowledge of the work.

Project personnel will check all phases of the work and materials for conformance with the Plans and Specifications. They will have the authority to reject materials and suspend any work which does not conform to the Plans and Specifications. Contract Administrators will be kept closely informed when these problems arise.

When the procedure in any operation is designated in the Specifications, it shall be rigidly enforced. Project personnel shall always bear in mind that the management of the work is the Contractor's business. However, if any methods are employed which will impair the quality of the finished work, the Contractor should be instructed to correct the deficiency and advise the Contract Administrator of the action taken. The project personnel, including the Contract Administrator, will in no way attempt to supervise work for the Contractor.

Project personnel will not be authorized to revoke, alter, enlarge, relax, or release any requirements of the Specifications, nor to approve or accept any portion of the work or to issue any instructions contrary to the Specifications. If conditions arise which seem to render it impractical to enforce the Specifications, project personnel should discuss this condition with the Contract Administrator.

A set of Plans and a copy of the Specifications will always be available for reference. It will be the duty of all project personnel to study the Plans and Specifications and become thoroughly familiar with all the details of the work to be done. If anything is found which is not fully understood, they will consult with the Contract Administrator.

105.3 – PRE-CONSTRUCTION CONFERENCE

A. Setting Up

As soon as possible after the Project has been officially awarded, the Contract Administrator will arrange a conference with the Contractor and interested parties for the purpose of reviewing construction details, proposed schedules, utility work and special requirements of the project. Prior to this meeting, the Contract Administrator should have studied the Plans and Special Provisions and made a field inspection of the project to be well informed as to the requirements and existing conditions.

B. Invitees

1. The District Construction Engineer,
2. The Contract Administrator and principal project assistants,
3. The Contractor and its principal personnel,
4. Representatives of involved utilities invited through the Highway Design Utility Coordinator,
5. Municipal officials if involved,
6. A representative of the Maintenance District Office, and/or Turnpikes
7. For all Federally funded projects:

a) FHWA (only for non exempt projects)

b) Department's Labor Compliance Office (see Section F below).

8. Any other interested parties involved.
9. Project Manager (NHDOT)

C. Preparing agenda and providing a Written Record

The Contract Administrator is responsible for the pre-construction conference agenda, for conducting the discussions, and for making a written record of the conference discussions. The written record is prepared in letter form to the Construction Bureau Administrator with copies to all participants and the project file.

D. Discussion Topics as applicable to the Project:

1. The Contractor's proposed operating schedules, computation of work day charges, execution of working day statements, time schedule, and completion date requirements,
2. The work to be sublet, stipulations to be included in the subcontract agreements, Contract Administrator-Contractor relations and responsibility towards subcontractors and authorized representatives,
3. Legal relations and responsibilities; cooperation with utility owners, the public, and other Contractors; licenses and permits in connection with execution of the work, and local ordinances,
4. Special requirements and unusual conditions, conflicts and problems anticipated, clarification of construction details and Specification requirements, and procedures for assessment of time,
5. Inspection procedures, furnishing samples and the time and place of testing and accepting materials, locating and equipping the field laboratories, storage and use of materials,
6. Location and scheduling of temporary bypass construction, crossroad closures, and access facilities; general responsibilities with regard to traffic and public safety,
7. Employee and public safety, sanitary provisions,

8. Delegation of authority by the Contractor and the Contract Administrator, lines of communication, equipment and personnel.

E. Conducting the Meeting

The pre-construction conference, if properly conducted, can be of material aid in getting the project properly started. Participants should come prepared to make worthwhile contributions to the conference and the improvement of general relations. As moderator, the Contract Administrator should keep the conference discussions within the scheduled agenda and discourage any extraneous or digressive commentary.

F. Labor Compliance

A Pre-Construction Conference will be scheduled prior to the start of work on all Federal-aid projects by the Labor Compliance Officer (may be done at the regular pre-construction conference). Representatives from the Labor Compliance Office will discuss all civil rights issues that will include: OJT and DBE programs, Equal Employment Opportunity including discrimination, and Davis-Bacon Wage Requirements with the Contractor's EEO Officer, DBE contact person and Project Superintendent. Department personnel attending: District Construction Engineer, Contract Administrator, project personnel, EEO Coordinator/Labor Compliance Officer, DBE Coordinator and a field representative of the Supportive Services Consultant.

This meeting conveys to the Contractor the importance to which the Department views civil rights issues in the execution of the Contract.

SECTION 106 – CONTROL OF MATERIALS

106.1 – GENERAL

The requirements for control of materials are well covered in the Standard Specifications. However, the Contract Administrator should be aware that any temporary breaks in the limits of controlled access R.O.W. for pits, disposal areas and Contractor related uses will require prior FHWA approval.

For specific duties of project personnel and methods of sampling and testing, consult Division 700 of this Manual.

SECTION 107 – LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

107.1 – GENERAL

This section is well covered in the Standard Specifications with the exception of the following items:

A. Safety and Health Regulation for Construction Projects

The Contract Administrator and the project personnel should become familiar with the safety and health regulations contained in the Federal Register, Volume 37, No. 243 - Part II (or later revisions that become effective when they are issued) and in the *Guide on*

Occupational Safety on Highway Construction Projects published by AASHTO. A copy of the above mentioned AASHTO Manual should be available to project personnel on every project. It provides the regulations most applicable to highway construction as taken from the Federal Register. The Federal Register will be available in the Construction Bureau Office. Although project personnel must be primarily concerned with other phases of project administration, they should at all times assess the project operations for compliance with pertinent safety regulations. If an apparent violation is found, it should be brought to the attention of the Contractor immediately. Should the Contractor refuse to correct the situation, the Contract Administrator should give the Contractor written notice of the apparent violation, forward a copy to the Bureau of Construction, and place a copy in the project file. Where serious safety and health violations are observed that require immediate attention, see Section 105.01 of the Standard Specifications for the action to be taken.

B. Labor Regulations

Contract Administrators share responsibility for the enforcement of State and Federal labor regulations. Aiding the Contract Administrator with enforcement of these regulations are field representatives of the Labor Compliance Office(LCO). The LCO Field Rep will visit each project approximately once each month to review certified payrolls to ensure that the Prime Contractor has submitted payrolls within seven days from the payment date and that sub contractors have submitted payrolls within 14 days. The LCO Field Rep will also check to ensure contractors are classifying and paying workers in accordance with Davis_Bacon, have requested and received approval for additional classifications not appearing in the Wage Schedule, are fulfilling fringe benefit requirements and are not taking unauthorized deductions from their employees. The LCO Field Rep will also conduct employee interviews to validate the information appearing on the payrolls and to ensure compliance with applicable EEO requirements. The Contract Administrator should keep the Labor Compliance Office informed as to Contractor and Subcontractor schedules, to facilitate the LCO Field Rep visits and interviews.

Contact Administrators should brief the LCO Field Rep about any specific safety concerns while visiting the worksite, prior to doing interviews. As appropriate, the Contract Administrator should accompany the LCO Field Rep on the project site, if at all possible. Contract Administrators should also assist the LCO Field Rep by putting him/her in contact with the Project Superintendent, prior to performing interviews, as a courtesy to the contractor.

Contract Administrators are responsible for tracking the work of the contractors onsite and then recording when the companies work on the daily report and on the Payroll Log Sheet (sample on Page 100-79). As payrolls are received they should be logged into the Payroll Log Sheet, with the “date received indicated”. The third column of the Log Sheet is reserved for use by the LCO Field Rep, to indicate his review of the payrolls. Contract Administrators should work in concert with the LCO Field Rep to ensure that overdue and/or corrected payrolls are followed up on.

The Contract Administrator may be the first to become aware of Labor Compliance issues. They should note these possible issues/discrepancies and contact the LCO Field Rep to inquire as to proper procedure.

The LCO field representative will also periodically check the project bulletin board for correct posting of wage rates as well as other applicable EEO information.

C. Waterways and Wetlands

Common concern for preserving our environment has complicated the road building process. In the design phase of a project, the Department has considered all environmental impacts that new construction might have on local areas. Prior to construction, the Department should have obtained all permits required by Federal and State law for work in or near waterways and wetlands of this State. These permits apply only to work shown on contract Plans and designated within project limits.

The Standard Specifications state that the Contractor is responsible for obtaining and supplying sand, gravel, and embankment for fill. The Contractor must be aware of all Federal, State, and local laws and regulations regarding pit operation. The Contractor must secure necessary permits prior to Department approval of Standard Pit Agreement forms if required.

In addition to any pit operation, a Contractor may propose on-project work not shown on the Plans as a means of obtaining an end result. That work, if it involves waterways or wet areas and disturbs one acre or more of land, also requires Federal and State permits. The Contractor must apply for and receive the necessary permits before commencing work.

The purpose of these guidelines is to inform the Contract Administrator of what Federal and State laws must be noted and observed by the Contractor for work in or near the waterways and wetlands of this State and what permits may be required prior to the start of work.

1. Federal Laws and Regulations

a. Section 9 of the River and Harbor Act of 1899 requires a U.S. Department of Transportation (U.S. Coast Guard) permit to construct any bridge, dam, dike, or causeway in a "navigable water of the U.S." In New Hampshire, a "navigable water of the U.S." is "all tidal water and tributaries to the head of tide; the Merrimack River from the Massachusetts-New Hampshire line to Concord, NH; Lake Umbagog within NH; the Connecticut River to Pittsburgh, NH".

b. Section 10 of the River and Harbor Act of 1899 requires Army Corps of Engineers' authorization for construction of any structure in or over any "navigable water of the U.S.", the excavation from or deposition of material in such waters, or any obstruction or alteration of such waters. Structures or work outside the limits defined as "navigable waters of the U.S." require Section 10 authorization if the structure or work affects the course, location, or condition of the water body. If any such work is proposed, be aware that a permit may be necessary.

Section 404 of the Clean Water Act requires Army Corps of Engineers' authorization for the discharge of fill material into all "waters of the U.S." including wetlands (both adjacent and isolated) at specific disposal sites. "Wetlands" are defined as "areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support and normally do support a

prevalence of vegetation typically adapted for life in saturated soil conditions". A permit is required whether the work is permanent or temporary.

Pursuant to the Federal Clean Water Act, effective July 1, 2003 (68FR 39087) construction activities which disturb one acre or more are required to apply to the U.S. Environmental Protection Agency (EPA) for coverage under the National Pollutant Discharge Elimination System (NPDES) general permit for storm water discharges from construction activities.

For further information, see the publication by The New England Division of U.S. Army Corps of Engineers entitled *Are you Planning Work in a Waterway or Wetland?*.

2. State Laws (RSA)

a. RSA 482-a, Dredge and Fill Permit Program (Water Quality). This State law requires that Plans for any project involving work in the waters of the State or its immediate adjacent areas be submitted to the NH Wetlands Bureau for review and approval. Generally, such application results in concurrent notification to the Water Division of the NH Department of Environmental Services.

b. RSA 149:8a, Water Quality Permit Program. This State law requires that any person proposing to dredge, excavate, or place fill in or on the border of surface waters of the State, or any person proposing to impede natural run-off into surface waters of the State, submit detailed plans covering the proposal to the NH Water Supply and Pollution Control Commission 30 days before the undertaking. Written permission is required.

c. The Department's Standard Pit Agreement Form Mentions RSA 155-E:4, I-VIII. The RSA Chapter 155-E grants local government the authority to regulate excavation. Specifically, paragraph 4, subparagraphs I through VIII state where the regulator may not grant permission for excavation.

1. The excavation shall comply with the operational and reclamation standards of RSA 155-E:4-a, RSA 155-E:5, and RSA-E:5-a.
2. The excavation shall not be within 50 feet [15 m] of the boundary of a disapproving abutter or within 10 feet [3 m] of the boundary of an approving abutter unless approval is requested by said abutter
3. The excavation shall not be unduly hazardous or injurious to the public welfare.
4. Existing visual barriers in the areas specified in RSA 155-E:3, III shall not be removed, except to provide access to the excavation.
5. The excavation shall not substantially damage a known acquifer, so designated by the United States Geological Survey.
6. All required permits for the excavation shall be obtained from state or federal agencies.

This information is intended to alert the Contract Administrator to possible situations that may arise when a Contractor has failed his responsibilities to comply with State Laws as defined in the Standard Specifications.

SECTION 108 – PROSECUTION AND PROGRESS

108.1 – GENERAL

This section is well covered in the Standard Specifications. However, the Contract Administrator, in addition to being thoroughly familiar with this section, should pay particular attention to the section in the Contract entitled "Prosecution of the Work". The information in that section is of extreme importance in the scheduling and execution of the work for each particular project, and usually contains dates and conditions which the Contractor must meet.

SECTION 109 – MEASUREMENT AND PAYMENT

109.1 – GENERAL

This section is well covered in the Standard Specifications with the exception of Project Record Keeping. For detailed information on this subject, see Section 800 of this Manual.

SECTION 110 - ARCHAEOLOGICAL AND PALEONTOLOGICAL SALVAGE

110.1 – GENERAL

It is in the public's interest to preserve for public use historical and prehistoric objects such as Native American ruins, sites, buildings, artifacts, fossils, or other objects of antiquity that may have significance from a historical or scientific standpoint. On a construction project when it appears that significant historic or prehistoric objects have been or are about to be encountered, the Contract Administrator should immediately take steps to preserve them and should notify the District Construction Engineer. Steps will then be taken to advise the appropriate authorities within the State of the facts and permit them to inspect the site for the purpose of determining the advisability of salvaging the objects.

SECTION 150 – FIELD WORK AND STAKING

150.1 – GENERAL

This section describes some of the principal methods of field work and staking that Contract Administrators will require for construction projects. Some aspects of field work and staking are well covered in other sections of this Manual and will therefore be omitted to eliminate duplication. The Contract Administrator should bear in mind that

conditions vary considerably between projects, so the following discussion presents guidelines rather than hard and fast rules.

Generally, construction survey work by project personnel and or state survey crews, will consist of setting the initial construction stakes necessary for the layout and field control of the work and recording the basic measurements necessary for determining quantities for the project records. It will include setting stakes or marks to designate the limits of Right-of-Way; and to establish the location, grade, and alignment of structures. This work will also consist of taking cross sections or other measurements necessary for determining quantities of excavation.

The Contract Administrator is responsible directly for the construction survey work even though much of the stakeout work is assigned to survey parties. Regardless of how the survey party is organized administratively, the Contract Administrator must have full knowledge of the methods used and the results accomplished. The work must be planned and accomplished with due regard for the expediency and accuracy of the work.

In order to avoid delaying the Contractor's operations due to lack of layout, as much of the survey work and staking as is practicable should be completed prior to the actual start of construction activities. Where staking must await completion of one phase of work, and is required for the next operation, careful timing with the Contractor's work is necessary to avoid delay.

It is essential that work procedures in staking a project be conducted with sufficient checks to prevent errors. Errors in staking, besides being embarrassing to the Contract Administrator and the Bureau, may lead to additional expenses for the project. In staking structures or other work requiring precision, it is necessary that the work be carefully done and rechecked prior to commencing construction. It is assumed that the chief of the survey party is familiar with the methods and the procedures of staking; however, concurrence as to the procedure to be used must be obtained from the Contract Administrator before the start of staking operations. To promote efficiency and accuracy in the work, each member of the survey party, especially new members, should be explicitly instructed in the proper method of taking measurements and setting stakes. Periodic observations and checks on the work are essential to ensure that the survey work proceeds properly and conforms to the accuracy required.

The Contract Administrator and members of the staff responsible for staking should coordinate with the Contractor's superintendent ~~with~~ the method of staking to be used, how stakes are to be marked and guarded, offsets to be used, spacing, and other pertinent information. Information to be placed on stakes, abbreviations to be used, location of message on stakes, and definition of abbreviations, should be carefully explained so that no misunderstanding will result. Variations in staking for special items and areas can be made when the Contractor's personnel make their construction operations known.

At the start of the Project, Contract Administrators should make sure they have the proper supplies and equipment to do the required layout and staking. Transits, levels, and steel tapes should be checked and calibrated as necessary to make sure they are accurate and in good condition. All stakes to be used are supplied by the Contractor except the triangular "hub" stakes, which are available through survey parties assigned to the Project.

150.2 – PLAN CHECK

As soon as construction Plans are available and before any staking is started, a preliminary field check of the Plans should be made for apparent omissions and errors. Carefully check for proper location of drainage structures. All major structures should be checked as to plan elevations from finished grade to bottom of footings. A careful check of the plans may prevent costly errors and delays in the work.

150.3 – ALIGNMENT

A pre-survey meeting should be held with the Contractors' survey crew, NHDOT Survey Supervisor, Prime Contractor, and the Contract Administrator to discuss project survey needs and exchange project survey notes. The Department will provide the initial survey for the following:

1. Layout of overhead sign structures.
2. Layout and cross sections for retaining walls.
3. Offset line for pre-split when necessary.
4. Original & Final centerline (or an offset line).
5. Radius points (as determined at a pre-survey meeting).
6. Original sidestakes with elevations.
7. Control points on recycling or reclamation projects.
8. Centerline control point ties.
9. Wetland original & final sections (Moss system).
10. Original bridge layout & ties.
11. Channel & Bridge Excavation originals & finals (This may be done under moss system).
12. Bounds.
13. Fence line location.
14. Final X-sections (when needed).
15. Setting of original bench marks.
16. Utility pole locations

The Contract Administrator will also do spot checks on the following:

1. Line & Grade run by Contractor on subgrade and select materials.
2. Line & Grade checks for bluetops.
3. All working points on footing & bridge seats.

The Department will not correct the Contractors' errors. It is the responsibility of the Contract Administrator to assure the Contractor corrects their own work. The Contract Administrator must use their judgment to ensure the Contractor is using qualified people to perform all the survey work. The Contractor is responsible for the following layout:

1. Curb layout.
2. Mast arm, pullbox layout & elevations, light poles.
3. Sign base layout (except for full span overhead structures).
4. All reproductions of original bridge layout.
5. Any offset of centerline.
6. Any line or grade for resurfacing.
7. Any elevation needed for construction.

8. Line & Grade for subgrade, select material, blue tops.
9. Any and all layout for Contractors' use.
10. Drainage pipes including structures, (i.e. CB's – DI's – MH's)
11. Pavement Markings

The Contractor is responsible for replacing any survey points, bench marks, stakes or reference points they disturb or make inaccessible. Such replacement shall be performed under the direction of a Licensed Land Surveyor with the exception of side stakes or drainage reference stakes.

150.4 – STAKING

A. Signs

Signs will be staked at locations indicated on the Plans or in the applicable standards. A hub indicating the location and identification of the sign is usually adequate. Construction signing should be laid out and erected prior to the commencement of any work on the project. However, care should be exercised when the Contractor is erecting the signs to ensure the protection of underground utilities from damage. Permanent signing should not be started until the work near the sign location has been satisfactorily completed, with the exception of overhead sign bases that are often started before grading of slopes is complete.

B. Clearing

Clearing limits are normally 10 ft (3 m) beyond the top of slope excavation areas and 5 ft (1.5 m) beyond the toe of slope in embankment areas; however, be sure to check the plans for possible changes in this rule. These distances right and left of centerline can be determined by use of the cross-sections and should be entered in a bound field notebook. The contractor can then mark the clearing limits with fluorescent orange flagging by using this notebook. Normally, distances from centerline can be determined easily by measuring from side stakes that are near the clearing limits. If side stakes are missing, it will be necessary to measure the distance from centerline stakes. Any changes in tree lines shown on the plans or field changes in clearing limits should be entered in the field notebook and plotted on the record Plans.

C. Utilities

It is extremely important that utility structures or lines be located before operations begin in an area. *The Contract Administrator should make sure that the Contractor calls Dig Safe before any work is performed and make sure that the Contractors Dig Safe numbers are kept up to date. The Contract Administrator and/or the Contractor should also contact any utilities that may be located in the work area, which are not located by Dig Safe (eg: municipal water and sewer facilities).* Locations for utility relocation will have been previously approved by the utilities engineer and should be in the hands of the Contract Administrator.

At the pre-construction conference, after the Contractor has presented its proposed schedule, the utility companies will establish dates when their work will be accomplished. From that time on, the Project will progress with this schedule and commitments taking precedent.

A careful check of the Plans will show the location of all known utilities. If there is any doubt as to the location of any underground structure, the Contract Administrator should warn the Contractor and contact the utility involved. The utility should send someone to locate its lines, and the exact location and elevation should be recorded and plotted on the record Plan, including approaches where construction signing and guardrail may be located. This will enable relocation if necessary. Also, the Contractor should be encouraged to make its own separate record of these locations as insurance against damage in its later excavation operations. The staking and color coding involved is covered in more detail in Section 180.

D. Slopes

The Contractor has sufficient information as to grade and distance on the side stakes at the left and right of each *50 ft* station to produce top and toe of slopes and cut and fill elevations with its own personnel. Checks should be made, however, to be sure slopes are being constructed in accordance with Plan cross-sections as no allowance will be given if a fill slope is "fat" or a cut slope is under- or overexcavated. If either situation occurs, the Contractor should be notified to correct the situation in order to maintain uniformity in the slopes.

E. Minor Structures

1. Pipe Culverts. Pipe culverts should be located to best fit field conditions where straightening of the channel is not provided. The culvert should be located with respect to the existing channel in order to provide the most direct and unimpeded flow. Pipe culverts may often be altered from Plan location to better fit flow conditions, or to reduce pipe length. No major change in location and no change in size should be made without the approval of the District Construction Engineer.

When staking pipe culverts, the plan lengths and flow line elevations should first be checked in the field and adjusted to fit the conditions. Pipe culverts are staked by setting a hub stake on the centerline of the culvert at each end of the pipe with at least two reference stakes offset from each end. Elevations are taken on top of these reference stakes, and the stakes are marked with the cut or fill to flow line at end of pipe and the distance to end of pipe.

If there is a possibility of pay excavation and the culvert is skewed or on an odd station, an original section must be taken along the centerline of the culvert before any work disturbs the old ground.

The Contract Administrator should always consult with the Contractor to determine its plan of operation and check layout of culverts in order of priority, thus eliminating unnecessary delay.

2. Box Culverts. Box culverts need more detailed layout than pipe culverts. A base line should be established for excavation quantities as well as lines for headwalls and wingwalls adequately tied with reference stakes. Figure 1 illustrates a typical box culvert layout. A survey party normally will provide the initial layout for the Contract Administrator.

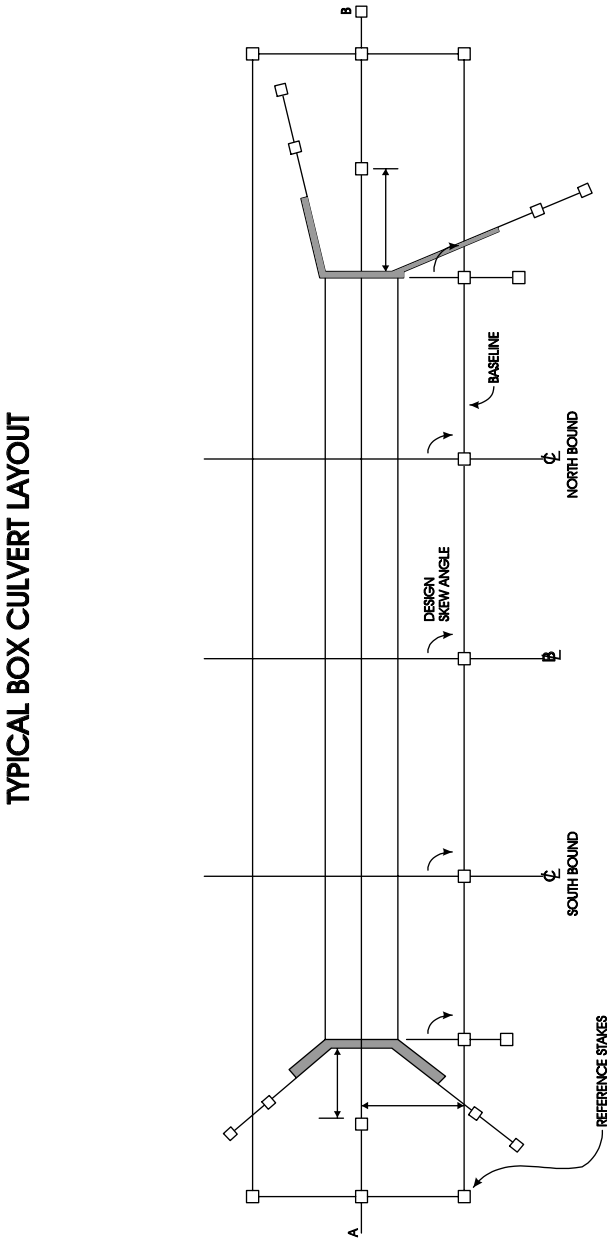


Figure 1: Typical Box Culvert Layout

Note:

1. Establish the roadway centerline station or the line by which the structure is controlled.
2. Occupy and establish Line A-B and other points along this line. Indicate the beginning and the end of the Box with offsets from lane centerlines or Base Line.
3. Establish a line parallel to the line of the box (parallel offset line) and use this line as working control once excavation is complete.
4. Along the parallel offset line, establish control points opposite the ones you wish to control for future layout work, such as expansion and construction joint locations.
5. Useful and accurate control must be easily reproduced to be of any real value to the Contract Administrator. All control must be established with this in mind.
6. Any grades given must be to Flow Line elevation only.
7. Offsets should be to centerline of structure and inlet and outlet only.
8. All control points should be protected by a bullpen of hip stakes with flagging.
9. This layout is normally done by a survey party under the direction of the Contract Administrator *and the contractor*.

3. Manholes, Catch Basins, and Drop Inlets. These structures require extra care in layout, particularly in curb areas. Line should be accurately run with the curb location established, including radii where necessary. It is essential that the center of the basins be located 1 ft (300 mm) from the face of the curb to ensure their proper fit. Also, with the curb line staked, manholes can be located so their covers will fall completely outside of the curb area. Whenever possible, the radius points should be saved. They will be found generally useful as the work progresses as well as for the eventual setting of the curb. Grate grades for catch basins and drop inlets in pavement should be given 1 to 1 ½ in (25 to 40 mm) lower than the finished pavement grade at curb line, and manhole covers should be graded flush with the finished pavement. Reference stakes are then set outside the work area, providing line and distance to the center of the basin as well as reference elevations to pipe flow lines in the basin and for the top of the grate. See Figure 2 below for an example of this. Where a basin or a pair of basins are designed in a low spot to take water from two directions, check the design location carefully to ensure the basins are properly positioned at the very lowest point. If blue tops have been computed at this time, plot a short profile to a distorted scale along the curb line from the blue top elevations to check the actual low spot.

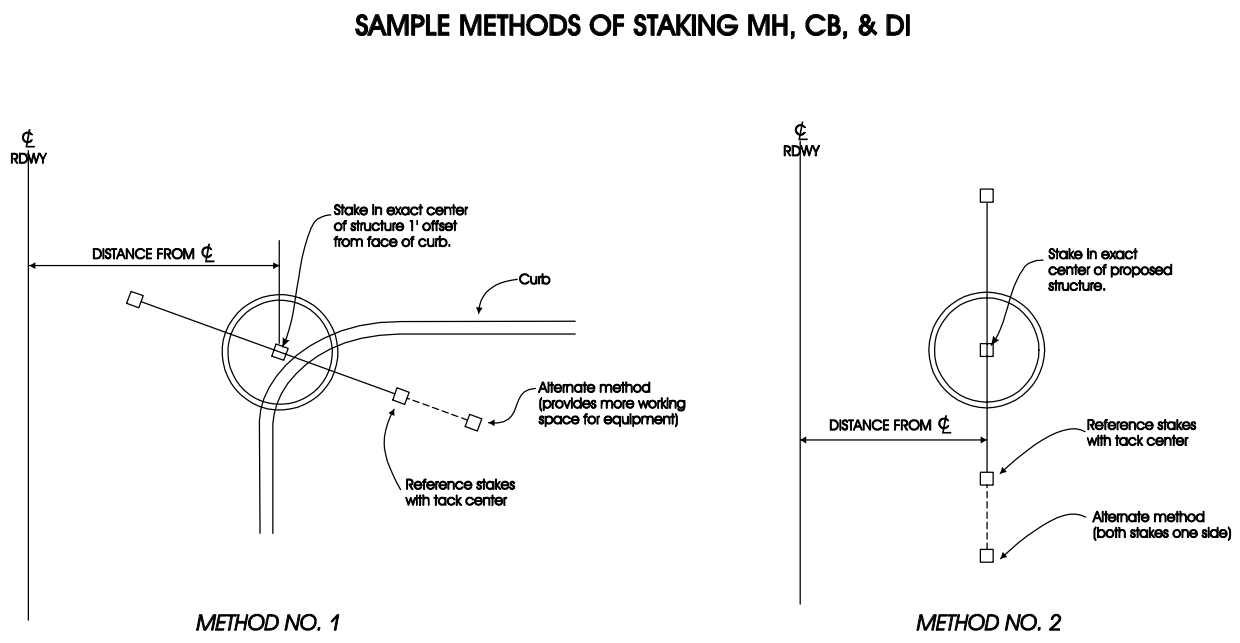


Figure 2: Sample Methods of Staking Manholes (MH), Catch Basins (CB), and Drop Inlets (DI)

Reference Stakes should be marked with the exact distance to the center of the structure (i.e. MH, CB, or DI), the cut measurement to the flow line of the outlet and inlet pipes and cut or fill to the finish grade (top of grade).

F. Major Structures (Bridges).

Prior to commencing the actual field layout of a major structure, considerable preliminary work is necessary. The first step should be a complete check of all distances and elevations on the Plans.

After determining that the Plans are correct, it is good practice to make a rough paper layout of how you intend to stake and reference the structure. In most cases, the Survey Section is contacted to send a survey party to the Project to lay out the structure. The Contract Administrator and the contractor, should work closely with the survey party to ensure that it provides all reference points necessary to replace any disturbed control lines as construction progresses. The Survey Section will check all angles and diagonals, as well as submitting its notes for a computer check.

Department practice will be to stake and reference only those centerlines and layout lines used as dimensional references on the Plans. These lines will include:

1. Bridge centerline or baseline,
2. Centerline of piers and abutments or their centerlines of bearing, and
3. Layout lines for wingwalls or retaining walls.

Measurements will be made during all stages of layout to the nearest 1/8" (3 mm). Specific structure element locations such as piles, edge of footing, end of wall, or other details which can be located from the staked lines and Plan dimensions are to be staked by the Contractor and then checked by the project personnel. The Contract Administrator may set centerline and grades on batter boards adjacent to the work to aid the Contractor in the initial stage of construction. After concrete has been placed, it is very helpful to scribe working lines on the concrete surface. These working lines can be transferred to the new concrete surfaces as the work progresses.

Several different methods of structure layout are shown in Figure 3 through Figure 6. These are some of several solutions that might be used, depending on the terrain around the structure and the complexity of the bridge.

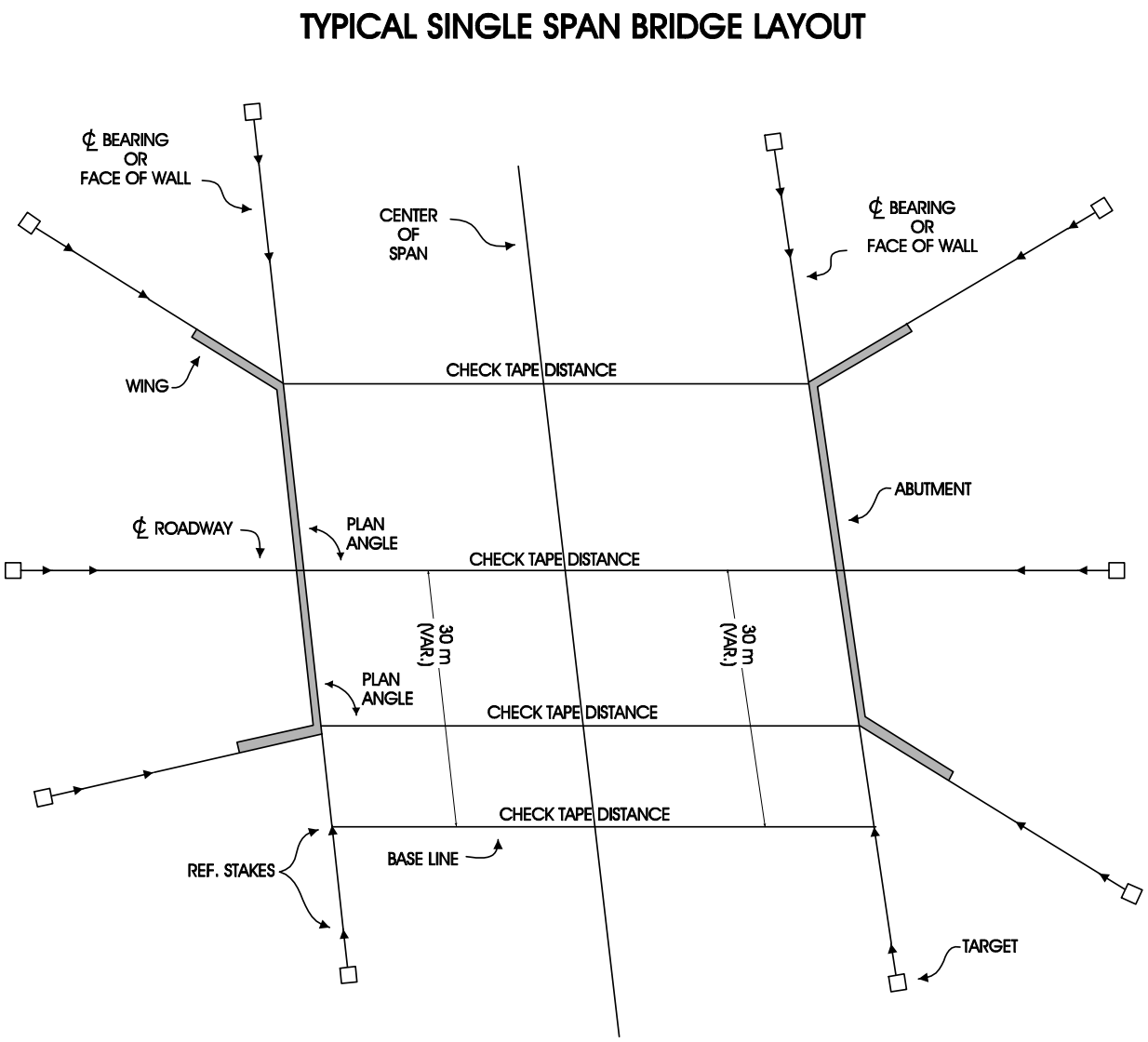


Figure 3: Typical Single Span Bridge Layout

The above is one of several methods to lay out a single-span structure. Targets and reference stakes shown are ideal but irregular terrain and complexity of structure may limit the choice of layout staking and require other methods.

In any case, distance checks between centerlines and bearings should be made at various points to ensure proper span length control.

TYPICAL MULTI-SPAN BRIDGE LAYOUT (DRY)

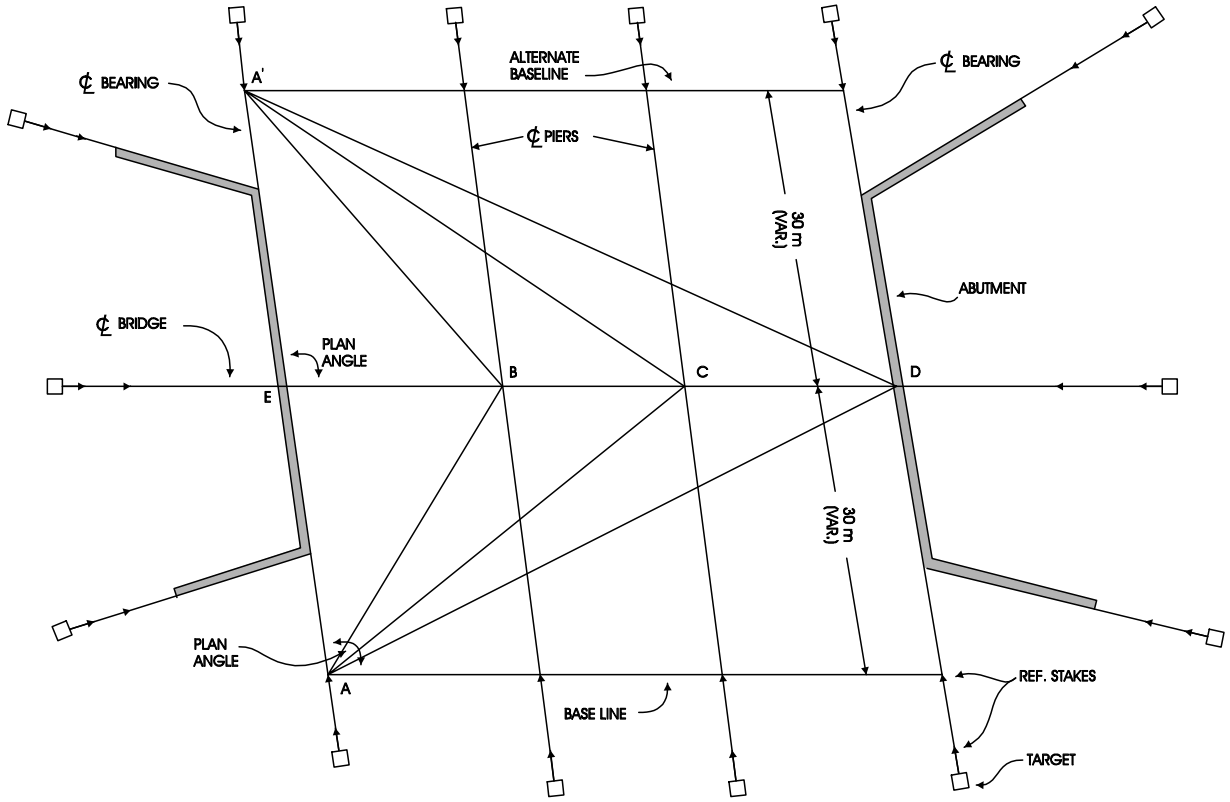


Figure 4: Typical Multi-Span Bridge Layout (Dry)

The above layout using two base lines for checking span lengths would be ideal as long as targets and reference stakes could be set at the locations shown.

With the base lines set as shown, angles such as EAB, EA'B, EA'C, etc. can be predetermined and used periodically as a check to substantiate center of pier points that have been measured and set. These check angles are used only as a back-up check of actual taping of spans at centerline of bearings and piers.

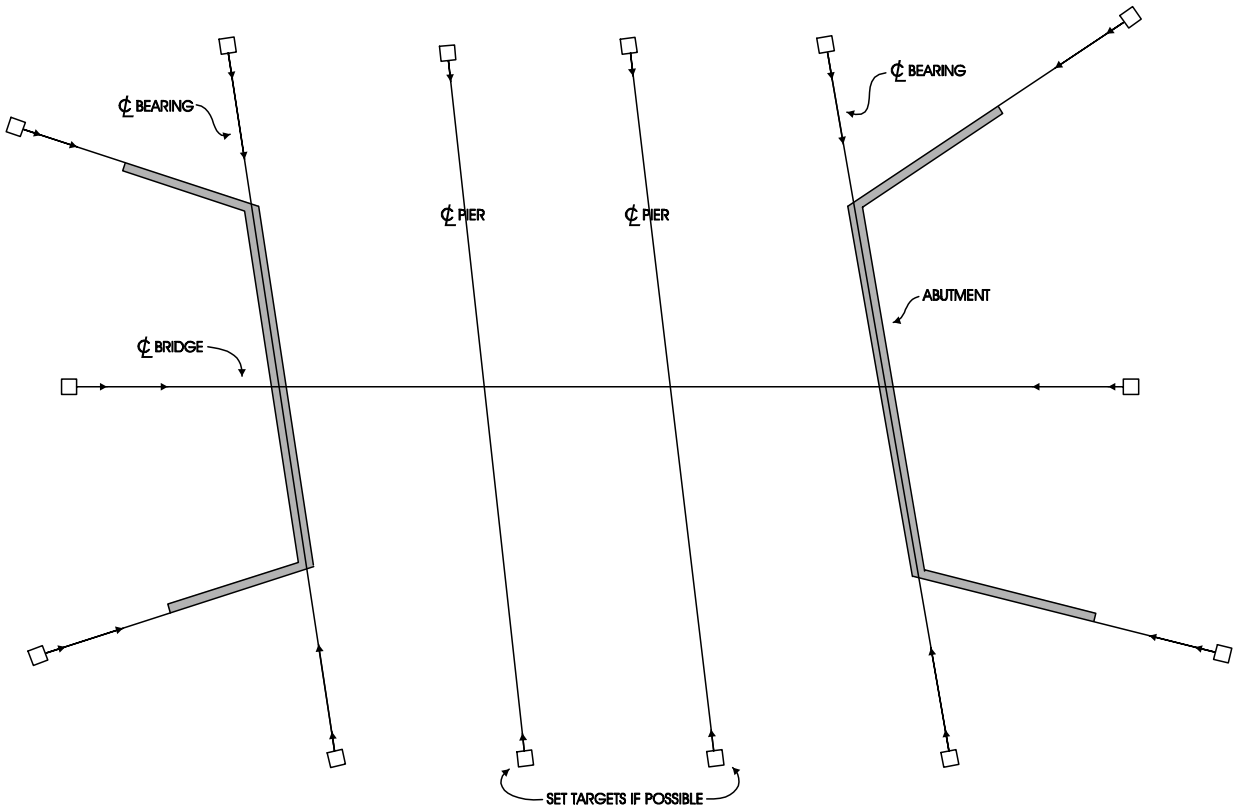


Figure 5: Typical Multi-Span Bridge Layout (River Crossing)

In a river crossing layout, pier centerlines may be inaccessible for targets or stakes in which case both abutments would have to be laid out with a geodimeter and checked by triangulation. Then, as construction progresses to the pier, reference points on forms or causeway areas could be established for use during construction of the pier. Angle and tape checking can then be done as previously discussed in Figure 4.

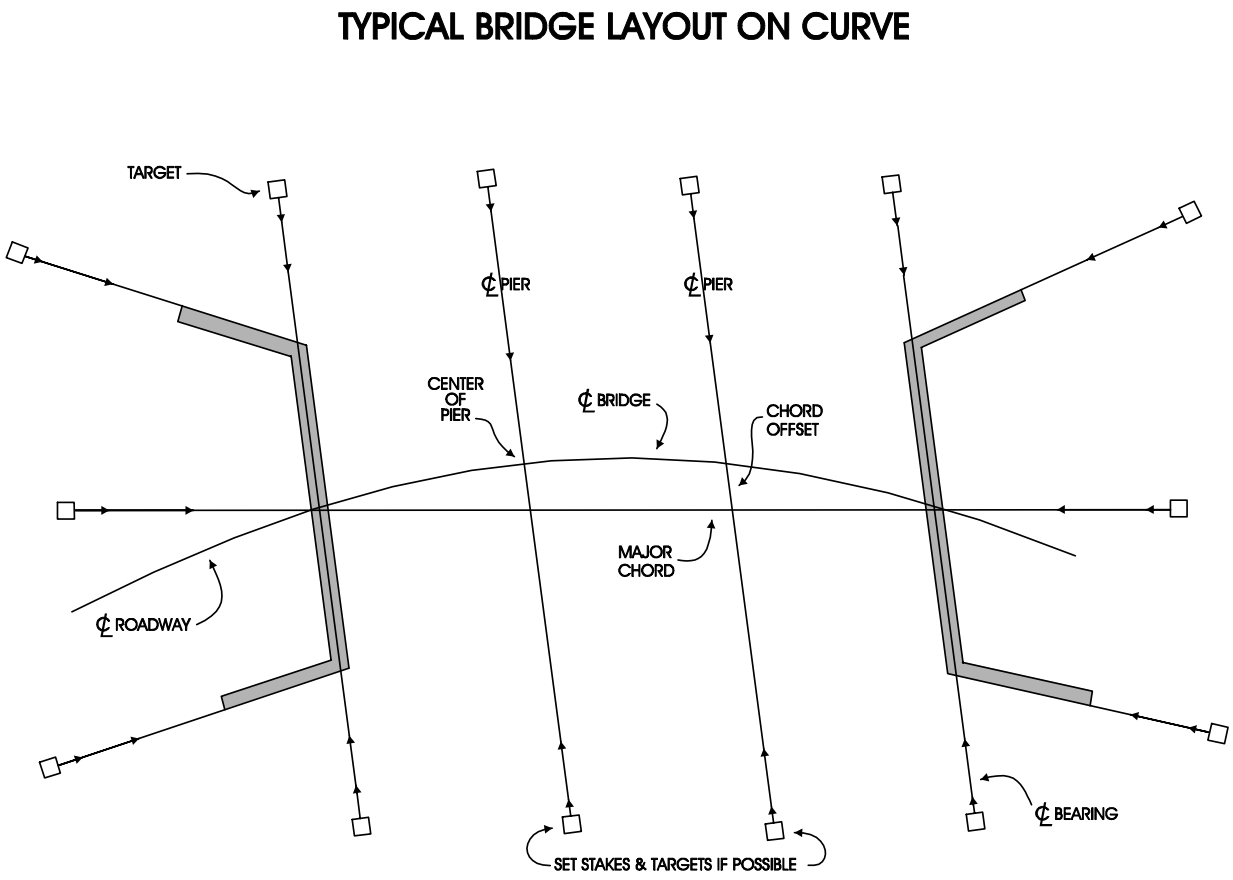


Figure 6: Typical Bridge Layout on Curve

Bridges on curves should have bearing lines and centerlines of piers referenced with targets and stakes as shown, if possible. It may be that only abutment centerlines of bearing can be tied, in which case it becomes imperative that both ends of the major chord be referenced so that it can be accurately reproduced. The points may be the only control the Contract Administrator will establish until site work is complete and control can be maintained on all parts of the structure.

G. Curbing, Sidewalks, and Guardrail.

Stakes for curbs and sidewalks should be set with a transit to the alignment and grade shown on the Plans. These stakes should be set at a uniform distance behind the curb line that will allow them to remain undisturbed while the curb is set. Curb and sidewalk radii require special attention to ensure that tangents and curves meet properly. A method of staking a short radius curb where the radius point is inaccessible is shown in Figure 7. Guardrail may be staked in the same manner as curb and sidewalk, if necessary. If any of the above items are to be installed after the completion of surface treatment and there are centerline tacks in the pavement, they will provide line and grade for these items. It will then be necessary to stake only special features such as ends and short radius curves.

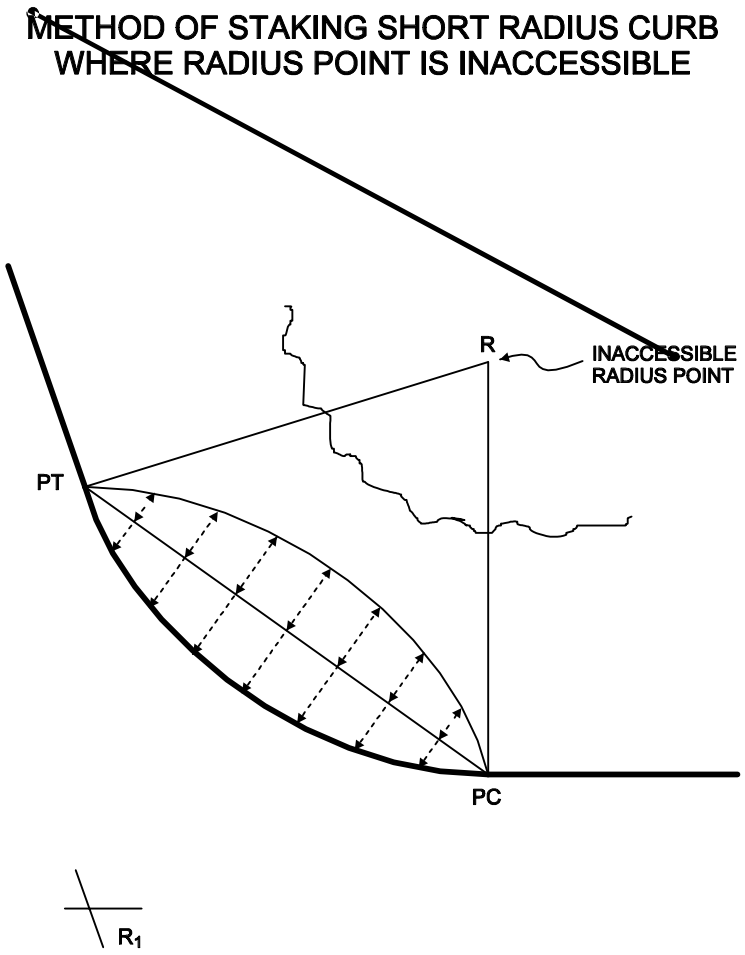


Figure 7: Method of Staking Short Radius Curb with Inaccessible Radius Point

To stake a short radius curve with an inaccessible radius point, first stake the tangent sections that join the curve and locate points PC and PT as given on the Plan. Swing the given radius from the PC and PT to intersect thus locating R_1. With a string stretched between the PC and PT swing the given radius using R_1 as the radius point. Measure from this arc to the string and an equal distance beyond (perpendicular to the string) to locate points on the curve.

H. Bounds.

Right-of-Way bounds are staked by a survey party at the initial construction layout stage at the locations indicated on the Plans if they do not fall within the work area. Bounds will not be set in loose fill slopes, slides, or streams or other locations where it is apparent that their position would soon become inaccurate. Reference bounds as shown in the standard sheets may be used in these situations.

A steel tape and transit and/or total station are used to set straddle stakes to the nearest 1/8" (3 mm) for the Contractor's use in setting the bound.

The Contractor should be cautioned not to disturb the straddle stakes to enable the bounds to be checked after being set. A record of bound locations should be kept in a survey notebook by the survey party, denoting the location and date for each bound set.

I. Preservation of Monuments and Markers

1. U.S. Government Monuments. It is important that all U.S. Government monuments within the limits of the Right-of-Way be preserved. Every effort should be made to recover, protect, and preserve all such monuments. Figure 8 and Figure 9 are reproductions of a Coast and Geodetic Survey information sheet describing and illustrating Government monuments. Location survey crews will have located and made ties to all monuments which they are able to find in the vicinity of the proposed work and will have made arrangements for their relocation if necessary. In the event the construction crews find an additional monument within the highway Right-of-Way or in the work area, take the necessary action to preserve the monument and immediately notify the Chief of Design Services, giving a detailed description of the marker. The Chief of Design Services will provide the information as to the action which must be taken.

2. Property Lines. Property lines and corner monuments are normally located by a survey party as part of the preliminary survey. Stone walls, tree lines, lines of blazed trees, and the like are located by station and offset with a cloth tape and are measured to the nearest 1 ft (300 mm). Iron pins and other corner monuments are located by swing ties, transit angle and distance from the centerline using steel tape measured to the nearest 1/8" (3 mm) or a total station.

   The Contract Administrator should observe the apparent property lines and monuments to determine that they are already recorded. Where omissions are found or a property owner points out monuments not readily apparent, the Contract Administrator should make arrangements to locate these points prior to their being disturbed by construction operations, either with a survey party or with project personnel. These ties should be recorded in a bound field notebook and plotted on the record Plan.

   If requested, property points that have been removed by construction operations can be reproduced for the information of abutting owners. Contact the Chief of Design Services for a survey party to lay out the point. If this is not possible and project personnel have to furnish the point, be sure no other layout work other than the point itself is given.

   The intent is to reproduce a property point that was removed during construction, not to establish property lines for the property owner. The property owner should secure a private survey party to establish boundary lines outside of the State Right-of-Way.

MID-CONTINENT FIELD DIRECTOR
COAST AND GEODETIC SURVEY, ESSA
ROOM 1436, FEDERAL BUILDING
601 EAST 12th STREET
KANSAS CITY, MISSOURI 64106

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON 25, D.C.

INTRODUCING MARVIN MARKER

My name is Marvin Marker. I belong to an extremely large family of bronze station markers which are property of the U. S. Coast and Geodetic Survey. Because of my 150 year s longevity, I was chosen to solicit your help in a serious family problem.

Our problem is the same as that faced by people throughout the world today - SURVIVAL. Yet our concern, apart from man's, is not because of the present world situation. Our chances of survival are slim regardless of the world's condition! And they are getting slimmer all the time! That s why I am appealing to you.

Lately our lineage has suffered terrifically because of premature deaths. Last year, thousands of Markers met with ill-fated deaths. Hundreds were mistreated, abused, uprooted and thrown away. Some were even brutally murdered. Few, I am sorry to say, ever die comfortably of old age.

Although I am emotionally involved as a member of the family, I can t help but think that people, too, would become a bit emotional if they knew the terrific expense involved in replacing us. Someone told me that the Government spends thousands of dollars each year just replacing unfortunate Markers (Boy! That sounds like an awful lot of the people's money, since they're always complaining about not having enough!!) And yet I m sure that if people were made aware of a few things about us, 95% of these losses could be prevented.

From time to time we suffer through maliciousness. Halloween, without fail, finds pranksters attempting in various ways to pry us up. Souvenir hunters, too, frequently steal us for use as paperweights, bookends, or just for the thrill of an unusual memento. The laugh will be on them if they are ever caught, though! Imprisonment or a $250 fine hardly seems worth the thrill they receive from such frolicking.

Our biggest enemy, however, is the man behind the bulldozer or grader. Brother! On more than one occasion in my lifetime I have had to do some fast praying for fear that I would follow some of my relatives to the grave — an unfortunate victim of a crushed disk! I thank my lucky stars that the present owner of the property on which I live knows all about me, and my value to surveyors and engineers. He takes special precautions to see that I stay healthy, and that no man or machine damages me.

It s because of these well informed, thoughtful people who are careful to watch for us and for our distress signs, that many Markers live long, useful lives. Actually, we are supposed to be immortal. But, some of the family have died of old age, erosion or sedimentation because the services of a professional engineer were not engaged soon enough to save them.

Please, won t you perform a valuable service to your country and community by helping Markers live a normal life span? Engineers, businessmen, housewives, students, — Just about every citizen can help!

Remember these facts!

(1) Never remove a survey marker. Once this is done, the value of it is lost entirely, and replacement is costly.

(2) If there is construction going on in your area and you notice a survey mark which appears to be in the way, call it to the attention of the surveyor in charge to insure that he is aware of it.

(3) If you see a survey mark which appears to be susceptible to damage of any kind, or which seems to be undergoing erosion or other "old-age ailments," flag it by driving stakes nearby and marking them with red ribbon, cloth, or plastic.

(4) In all cases, submit a report of your findings to The Director, Coast and Geodetic Survey, U.S. Department of Commerce, Washington 25, D.C.

When you respond to this appeal, you will be performing a tremendous service for your Government. And as for me and the Marker Family, you will be helping to achieve longer and better lives for Markers all over the World.

Thanks from the entire family!

HELP PRESERVE SURVEY MARKERS

Figure 8: Survey Markers

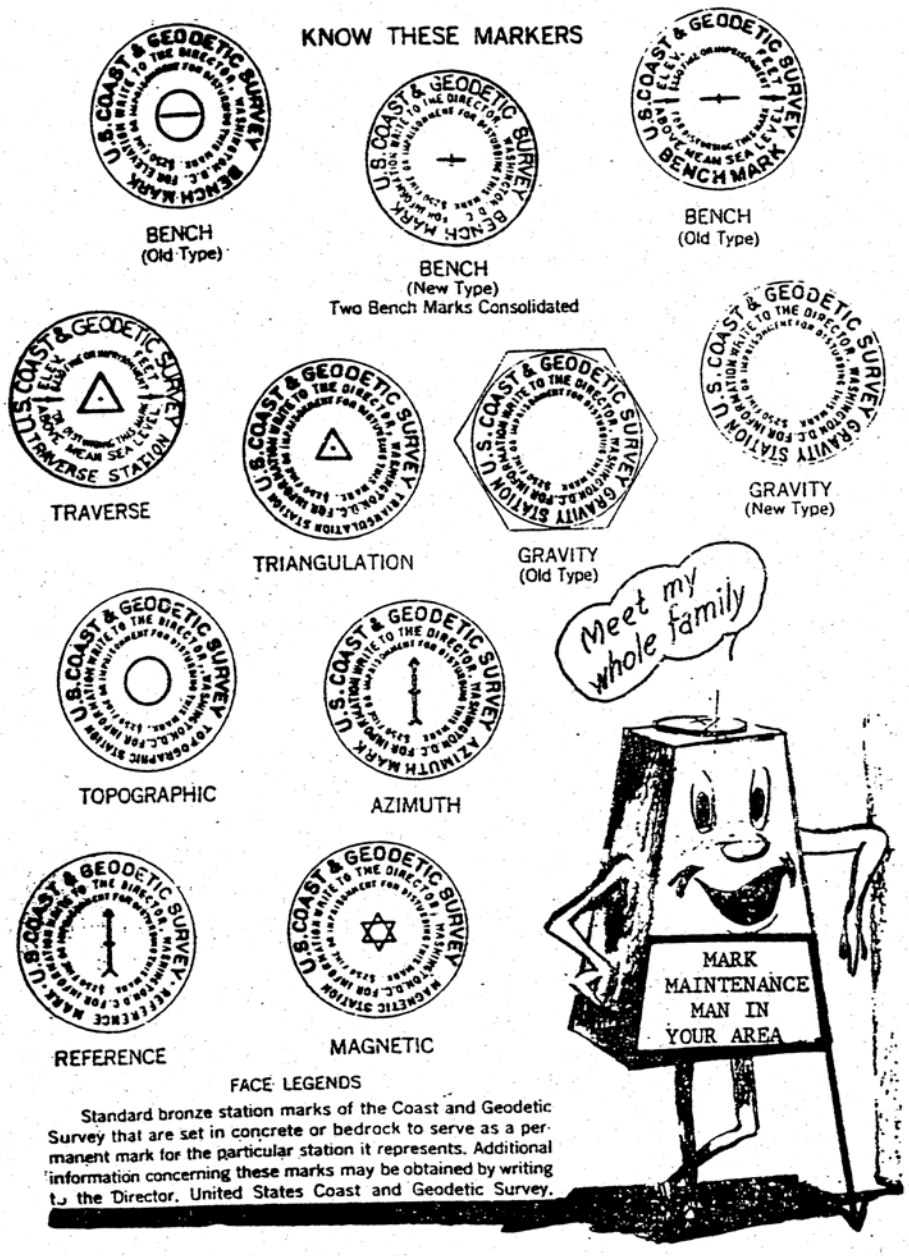


Figure 9: Survey Markers

150.5 - SECTIONING

A. Topsoil Excavation

Material found suitable for use as humus or loam in either excavation or embankment areas is removed and stockpiled for use under the humus and loam items. The topsoil removed from fill areas must be measured for payment as excavation. One of the best methods consists of taking sections after the topsoil is removed. It also may be measured from numerous random depth checks recorded during excavation and computed as illustrated in Division 800 of this Manual under Sample Field Notebook field note keeping. Stockpiles of topsoil can be measured after excavating, but this method is satisfactory only if the Contractor separates the piles so that only those from embankment areas are measured and recorded for payment of excavation.

B. Muck Excavation

Muck excavation limits will normally be designated on the cross sections. These limits are based on a 1:1 slope from the shoulder break to the bottom of muck. The Contract Administrator must bear in mind that these limits will vary if the muck depths vary from the Plan depth.

Initially, the Plan limits should be staked and will be subject to change as the muck depth is determined during excavation by either "sounding" or probing to hard bottom. After the muck has been satisfactorily excavated, final sections should be taken immediately and backfill material placed to prevent surrounding muck from sliding into the excavation. These final sections should be recorded in a bound field notebook and plotted on the record cross-sections.

C. Rock Excavation

When rock is encountered, a survey party should be obtained as soon as the earth overburden has been satisfactorily removed so cross-sections may be taken before drilling operations begin. The interval between sections will vary with substantial change in the rock outcropping, but normally will be 25 ft (10 m). Intermittent sections should be taken during rock excavation, to insure that the rock is being removed to the correct template and to make the Contract Administrator aware of any overbreakage issues. Final rock sections should be taken at the stations where original cross-sections were taken.

On projects where excavation is unclassified or has been unclassified by the Contractor so that regular ledge sections are not required, the Contract Administrator will provide elevations of the ledge on 50 ft (20 m) sections where the ledge template line intersects the top of the ledge. Two shots that span the intersection are sufficient. This information should be recorded in a bound field notebook and plotted on the record sections to aid Engineering Audit in determining excavation limits.

D. Structure Excavation

Sectioning of all structures is well covered in the respective sections of the Construction Manual. For instance, bridge excavation procedures are found in Section 504. Sectioning for pipes and other drainage items is found in Section 603 of this Manual.

150.6 – FINE GRADING

When it is time for the contractor to fine grade the subgrade, the contractor should re-run the centerline and use this centerline to offset its working stakes. It is the contractor's responsibility to check the location, alignment, and elevations to ensure that they are correct.

The following steps outline the usual procedure:

1. The contractor reestablishes the centerline.
2. The Contractor sets out working stakes and marks the station and offset on the stake.
3. The Contract Administrator spot checks the Contractor's staking for conformity to typical cross sections.
4. The Contractor establishes finish grades on the sub-grade stakes using the elevations as taken from the Plans.

If the actual finish grade cannot be placed on the stake, then the procedure is to make a reference of cut or fill to the actual finish grade. Care should be taken to balance foresights and backsights, and shots should be kept within a distance of 150 ft (60 m) of the transit. Before grades are run from each change of H.I., the calculations should be checked to ensure that the proper grades are matched to the proper stake.

Stakes should be firmly set and generally offset 1 to 2 ft (300 to 600 mm) beyond the computed edge of subgrade. In this way, the stakes will remain in position with a minimum of replacement throughout the placing of base materials.

See Section 214 of this manual for details of fine grading controls.

SECTION 151 – FIELD POLICIES

151.1 – GENERAL

During construction, the Standard Specifications may need interpretation and added instructions to avoid delays or misunderstandings. This section covers the established policy of the Department and Construction Bureau as well as instructions on implementing rules, regulations, and laws from other governmental agencies that pertain to construction projects.

151.2 – AIR POLLUTION REGULATIONS

The Contractor must abide by the regulations of the NHDES-Air Resources Division. Presently the following regulations apply to construction operations:

A. Env-A 1000 – Prevention, Abatement and Control of Open Source Air Pollution (contains rules covering both fugitive dust and open burning, including the burning of tires and tubes)

B. Env-A 2700 -- Hot Mix Asphalt Plants

C. Env-A 2800 -- Sand and Gravel Sources, and Cement and Concrete Sources

D. Env-A 600 -- Statewide Permit System

These rules are available in their official form on the OLS website – http://www.gencourt.state.nh.us/rules/env-a.html – and on the DES website at http://www.des.state.nh.us/Rules/air.htm. More information about the permit program can be found at http://www.des.state.nh.us/ard/permit.htm

The Air Resources Division generally enforces its own regulations; however, the Contract Administrator should also be alert for apparent violations in connection with the project. For further instructions, see the Special Provisions or call the Construction Bureau Office.

151.3 – RIGHT-OF-WAY

The Department has negotiated on the basis of the Plans agreements with the owners of property abutting the Project. Any changes made in the field such as culvert locations and additions, grade changes, elimination or moving of drives, fattening of slopes, and the additions or relocations of drainage ditches may be cause for new assessment of damages. For this reason, such contemplated changes should be noted on the Daily Report and brought to the attention of the District Construction Engineer prior to beginning the work. Any work outside the Right-of-Way other than shown on the Plans constitutes a trespass unless prior approval from the abutter has been granted. The Contract Administrator will receive a copy of any Right-of-Way Special Agreements and should in turn notify the Contractor of these.

The existing Right-of-Way of the old highway layout does not necessarily revert to the abutter even though the old layout may be outside the proposed Right-of-Ways as indicated on the Plan. Owners should be advised that the final disposition of sections of

the old highway is not decided until completion of a project, even though marked "abandon" on the Plans, and must be carried out through the due course of law.

In the case of properties that were aquired by the Department through condemnation, do not make any agreements with the property owner without consulting with the State's A.G.'s office.

INSTRUCTIONS TO NEGOTIATORS

On all future projects the term "point of access" will mean that the State during the construction of the project will provide access to the property at the point indicated on the Plans or chosen by the Owner with the approval of the Right of Way Administrator. This instruction shall apply to all negotiations unless approval to the contrary has been specifically given by the Right of Way Administrator.

In implementing the above instructions, only those points of access shall be permitted which have been specifically designated by the Special Committee in its findings.

October 24, 1996

_____
Deputy Commissioner and
Chief Engineer

cc:
Assistant Commissioner
Assistant Chief Engineer
Design Engineer
Construction Bureau Administrator

PROCEDURE FOR CONTRACT ADMINISTRATORS REGARDING LAND DAMAGE CASES

This procedure applies only to those cases where the Department has been unable to make a settlement with an owner.

A listing of these owners who have "not indicated acceptance of their awards" are included in the Right of Way Bureau's letter on Special Agreements. Our Declaration of Taking is normally made only about three months prior to the start of construction and the owner has up to three months in which to file preliminary objections. Therefore, at this time, it is not known what damage cases will be settled in court.

There have been some instances ~~recently~~ in which an attorney representing a land owner in a condemnation case approached various members of our department and obtained certain information together with copies of our worksheets. This information has had an important bearing on the State's preparation for defense of the case in question.

The information in question consists of two categories as follows:

> **Category No. 1** Our Standard Specifications, Project Plans and Special Provisions including such information as alignments and grade slopes, in other words 'Bidder Information', is in this category.
>
> **Category No. 2** This category contains such information as State Documents, worksheets, photographs, special materials or soils reports, etc.

As a general policy there is no objection to our providing attorneys with basic (Category No. 1) engineering features of our work related to the acquisition of privately owned property. However, it is important that when an attorney contacts a member of our Department for information classified as Category No. 2 that this information should not be provided without our obtaining approval from the Attorney General's Office. This applies to cases that have not been settled.

It is suggested that when you are approached by an attorney you should determine whether or not the information desired concerns a land damage case. If the answer is "yes", they should be informed that before we can release this information, (Category No. 2) we must obtain approval from the Attorney General's Office through our District Construction Engineer and the Right of Way Bureau. Information under Category No. 1 can be released at any time.

The adoption of this policy is not for the purpose of attempting to withhold any information we may have. The policy is established as a means of developing coordination between our Department and the Attorney General's Office concerning the release of information on a case that may be in litigation.

In all condemnation cases, it is essential in preparing the State's case that the Attorney General's Office is fully aware of the material that we have supplied to an outside attorney. It is requested that you keep a detailed diary or log regarding all information connected with such cases, including before and after photos, conversations, dates and any other information you feel may be in the State's interest.

151.4 –CONSTRUCTION ZONES

The following regulation is currently in effect for construction zones. For the extension of construction zones to haul materials as specified in Section 2(b) on the following page, note that the Contractor must submit the model and type of equipment that it wishes to use. The Contract Administrator should assist the Contractor in obtaining sufficient and accurate data so that the requested zone extension may be readily established.

March 11, 1963

STATE OF NEW HAMPSHIRE

Department of Transportation

REGULATION FOR ESTABLISHMENT OF CONSTRUCTION ZONES

Pursuant to the authority granted the Commissioner of the Department of Transportation under Chapter 263:62 of the Revised Statutes Annotated, Construction Zones are established in accordance with the following regulation:

1. Location of Construction Zones.

   (a) A construction zone will hereby be established on any State Highway or part thereof designated for construction, reconstruction or repair by this Department.

   (b) A construction zone will hereby be established on any city, town or county road or street or part thereof designated for construction, reconstruction or repair by this Department acting as agent for any city, town or county.

2. Limits of Construction Zones.

   (a) The beginning and end of the designated projects including approaches and connections will constitute the limits of construction zones established under this general policy.

   (b) Any extension of the construction zone outside the limits as noted in (a) above will be granted by letter on an individual basis in conformity with previous procedure. Notification shall be sent forthwith through copies to the Commissioner of Safety and the Director of State Police.

3. Marking of Construction Zones.

   (a) The physical limits of the construction zones as described in 2 (a) above will be marked by the erection of construction signs at the beginning and end of each project including both directions of travel to read as follows:

      (1) Beginning of Project.

ROAD WORK AHEAD

Re: Establishment of Construction Zones (Cont'd)

(2) End of Project.

END ROAD WORK

(b) A warning sign will be erected in advance of the designated construction project including both directions of travel to read as follows:

ROAD WORK AHEAD

4. Use of Construction Zones.

(a) Establishment of a construction zone will permit unrestricted reasonable use of all road construction and maintenance equipment within the limits of the new highway layout and on those sections of the old layout that are to be abandoned and removed from all use as a public highway. However, all vehicles subject to registration which are to exceed the Maximum Gross Weight Limits shall be registered for the Normal Gross Weight Limits.

(b) The use of a construction zone as an extension will be covered by letter on an individual basis as outlined under 2 above. Notification shall be sent forthwith through copies to the Commissioner of Safety and the Director of State Police.

5. Duration of Construction Zone.

(a) A construction zone will become effective at the time of the erection of the signs and will remain in force until the signs are removed by Authorized Personnel.

(b) Construction zone granted by 2 (b) will automatically expire by removal of signs as outlined in 5 (a) or by letter if conditions warrant an earlier suspension.

_____

Commissioner

151.5 – CONTRACT CHANGES REQUIRING PRIOR APPROVAL OF FHWA

Federal regulation PPM 21-6.3 (Paragraph 18b) provides that "All major changes in the plans and Contract provisions and all major extra work must be approved in writing by the FHWA Division Engineer in advance of their effective dates except that when

emergency or unusual conditions justify, the Division Engineer may, at his or her discretion, give tentative advance approval orally to such changes or extra work and ratify such approvals in writing as soon thereafter as practicable."

The following types of changes are considered to be major:

1. Revisions of geometric design (main line roadway, ramps, frontage roads, or cross areas).

2. Revision of the structural section above the subbase.

3. Addition, deletion, or relocation of bridges and the addition, deletion, and relocation of other structures which would affect the functional scope and intent of the approved design.

4. Any change from the planned access control.

5. Any change which will alter the intent or scope of the contract or character of the work.

6. Changes which alter the Specifications, Special Provisions, or other contract requirements.

7. Changes which affect the safety and operation of traffic.

8. Changes which result in negotiated unit prices or performance of work by force account with payment for labor, materials, and equipment involved. (Adjustments in unit prices of items specifically covered by approved Standard Specifications will not require prior approval.)

9. Departure from approved Standards.

151.6 - WINTER CONSTRUCTION

When the Contractor intends to work some items during the winter months, December 1 to April 1, it will be required to adhere strictly to the Specifications. Adverse working conditions should be expected during this period, but will not justify any relaxation of standards.

This period does, however, appear to be a satisfactory time to perform clearing and ledge and muck excavation. Areas to receive ledge fill shall be cleared of snow and frost. Ensure that the Contractor is advised to keep within the working area when pushing off snow to eliminate excessive cleanup along the slope lines later. Damage done due to winter operations shall be corrected at the Contractor's expense.

Where concrete work is expected during the winter months, the Contract Administrator should review the Specifications, Section 520.3.7, and the Special Provisions carefully for the latest requirements for placing concrete in cold weather. Also, the Contract Administrator should request for submission to the Construction Bureau Office a written schedule of operations for this work that includes a description of insulating methods or procedures for heating for submission to the Construction Bureau Office. This schedule

should be requested well in advance of cold weather to allow sufficient time for review and changes if necessary before operations begin.

It should be understood that work performed during the winter must be confined to areas so that snow removal on traveled ways can be carried out without interruptions.

151.7 - MISCELLANEOUS INSTRUCTIONS

A. Shop Drawings

Shop drawings of structural steel, curb, railing, reinforcing steel, falsework, and other items integral to the construction of structures should be in the hands of the Contract Administrator prior to the time of erection. Contract Administrators should request approved if required (some are submitted for documentation) shop drawings when they have not been received through normal channels and have them available during erection of the appropriate elements of the structure. Requests for shop drawings will be made through the Construction Bureau Office.

B. Orders to the Contractor

Many of our Plans, Specifications, and Special Provisions contain the phrase "or as directed by the Engineer" or the phrase "or as ordered by the Engineer". The authority granted the Contract Administrator by this wording is recognized as being essential to permit practical adjustments in enforcing our Specifications to meet conditions that cannot be anticipated or completely covered by the written word. The granting of this authority, however, carries a responsibility. It is the responsibility of the Contract Administrator to substantiate a change in the Plans "as directed" or "as ordered" by a written statement to the Contractor. When possible, discuss changes with the District Construction Engineer and the FHWA. The direction or the order should be made in triplicate, the original being furnished to the Contractor with one copy being retained by the Contract Administrator and the third being forwarded to the Construction Bureau Office for the Project file. It is of vital importance that these written records of directions or orders be made at the time they are given and that a copy accompany the final Project records. Many times they have a very significant bearing in determining the payment for labor and materials during the computation of the final cost of the Project.

SECTION 152 - REPORTS AND FORMS

152.1 – BUREAU OF CONSTRUCTION FORMS AND REPORTS

Name of Form	Originated By	Page in Manual	Copies to: CONSTRUCTION BUREAU OFFICE	PROJECT RECORDS	EMPLOYEE	LABORATORY	CONTRACTOR	LANDOWNER	OPERATOR	When Submitted
Contractor's Progress Report	Contract Administrator	100-56	1	1						15th & END of each month
Daily Report	Contract Administrator	100-57	1	1						Done Daily
Disposal Agreement	Contractor	800-81	2	1			1	1		**Prior to disposal**
Pit Agreement Form	Contractor	800-86	2	1			1	1		**Prior to excavation**
Contract Estimate	Contract Administrator	100-65	1	1			1			15th & END of each month
Contract Administrator's Estimate of Balance and Excess	Contract Administrator	100-80	1	1						25%, 50%, 75%, & 98% of completion of project
Statement of Materials and Labor Used by Contractors on Highway Construction Involving Federal Funds (FHWA-47)	Contractor	100-85	1							completion of project
Application For Leave	Employee	100-90	1							
Authorization of Alteration Order, Extra Work, and Supplementary Agreement less than $10,000	Contract Administrator	100-63	1	1			1			Prior to work on affected items.
Bi-Weekly Time Report	All (Daily) Personnel	100-92	1							Bi-weekly

Bi-Weekly Overtime Report	Daily Personnel	100-93	1						Bi-weekly
Checklist For Plant Mix Pavements	Paving Inspector	440-40		1					Each day of paving
State Vehicle Accident Report	State Car Operator	100-100	1						24 Hours
Vehicle Usage Report	State Car Operator								Daily this information is put into MATS
Accident Reports	Injured Employee	100-105	2						
Personnel Assignment	Construction Bureau Office	100-103		1					At time of assignment
Utility Daily Report	Utility Foreman	100-111	1	1					Weekly, for previous week
Concrete Plant Work Sheet	Contract Administrator	500-66							Information to be given to plantman for Conc Placement
Concrete Batch & Delivery Record	Plant Inspector	500-69		1					Given to each truck for Placement inspector
Laboratory Tag	Contract Administrator	700-20				1			Each sample
Field Test Report	Contract Administrator	700-25		1					**With project records**
Laboratory Reports	Materials Engineer	700-26		1					**With project records**
Corrective Action Report	Contract Administrator	700-70		1					**With project records**
Daily Report of Extra Work	Contract Administrator	100-57		1			1		**With project records**
Pile Field Notes	Pile Inspector	500-17		1					With project records
Pile Loading Test	Pile Inspector	500-41		1					With project records

152.2 – CONTRACTOR'S PROGRESS REPORT

Soon after the contract is awarded, the Construction Bureau Office will request the Contractor to submit an original copy of a "Contractor's Proposed Schedule of Operation and Progress Report" form for approval. When completed by the Contractor, this form will indicate the proposed periods of time during the project duration that major items of the work, such as excavation, embankment, drainage, gravel, bridge items, curbing, and pavement, will be accomplished. Once approved, the Construction Bureau Office will forward a copy for use by the Contract Administrator.

In the event the Contract Administrator has not received copies of the schedule before work on the Project begins, he should determine if the Contractor has completed the form and sent it to the Construction Bureau Office. If not, the Contract Administrator should tell the contractor to do so.

Est. Starting Date Approx. 4/15/96
Completion Date 11/30/96

Project Town #1

State No.
Fed. No.

Item / Month / Est. Period	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
Clearing and Grubbing		50	100%						
Earth Excavation				50		100%			
Drainage						100%			
Select Materials							100%		
Bridge # 1						100%			
Bridge # 2							100%		
Pavement							100%		
Miscellaneous								100%	

S:\office\forms\contsch.xls

Figure 10: Sample Contractor's Schedule

152.3 – DAILY REPORT FORM

152.3 – DAILY REPORT FORM

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION